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=> FILE WPIX
FILE 'WPIX' ENTERED AT 16:57:05 ON 31 AUG 2006
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FILE LAST UPDATED:          25 AUG 2006      <20060825/UP>
MOST RECENT DERWENT UPDATE:     200655        <200655/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

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=> D QUE L39
L2            32 SEA FILE=REGISTRY ABB=ON  (27750-10-3/BI OR 7440-47-3/BI OR
                 132436-67-0/BI OR 185196-38-7/BI OR 213385-58-1/BI OR 304853-26
                 -7/BI OR 3081-61-6/BI OR 449158-84-3/BI OR 58-08-2/BI OR
                 59-67-6/BI OR 64913-19-5/BI OR 7439-93-2/BI OR 7439-95-4/BI OR
                 7440-09-7/BI OR 7440-14-4/BI OR 7440-23-5/BI OR 7440-24-6/BI
                 OR 7440-39-3/BI OR 7440-41-7/BI OR 7440-46-2/BI OR 7440-70-2/BI
                  OR 7440-73-5/BI OR 760962-71-8/BI OR 761426-32-8/BI OR
                 761426-33-9/BI OR 761426-34-0/BI OR 761426-35-1/BI OR 761426-36
                 -2/BI OR 761426-37-3/BI OR 761458-24-6/BI OR 762247-04-1/BI OR
                 989-51-5/BI)
L4             1 SEA FILE=REGISTRY ABB=ON  L2 AND GHRELIN
L5             1 SEA FILE=REGISTRY ABB=ON  27750-10-3
L32         1733 SEA FILE=MEDLINE ABB=ON  L4 OR GHRELIN
L33          116 SEA FILE=MEDLINE ABB=ON  L5 OR HYDROXYCITRIC?
L39            1 SEA FILE=WPIX ABB=ON  L32 AND L33


=> D L39 FULL

L39  ANSWER 1 OF 1  WPIX  COPYRIGHT 2006 THE THOMSON CORP on STN
AN   2004-689234 [67]   WPIX
DNC  C2004-244283
TI   Composition useful for reducing and maintaining body weight in person or
     other mammal by decreasing ghrelin levels comprises
     hydroxycitric acid.
DC   B05
IN   BAGCHI, D; KOTHARI, S; KOTHARI, S C
PA   (INTE-N) INTERHEALTH NUTRACEUTICALS INC
CYC  109
PI   US 2004186181   A1 20040923 (200467)*       8    A61K031-19
     WO 2004085462   A2 20041007 (200467)  EN         C07K000-00
        RW: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE
            LS LU MC MW MZ NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
         W: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE
            DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG
            KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ
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applicant

OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

TW 2004027447 A 20041216 (200615) A61K031-194

ADT US 2004186181 A1 Provisional US 2003-456592P 20030321, US 2004-805129 20040319; WO 2004085462 A2 WO 2004-US8474 20040319; TW 2004027447 A TW 2004-107527 20040319

PRAI US 2003-456592P 20030321; US 2004-805129 20040319

IC ICM A61K031-19; A61K031-194; C07K000-00

ICS A23L001-30; A61K031-455; A61K031-555; A61K031-704; A61K033-24; A61K035-78; A61P003-04; C07C059-245

AB US2004186181 A UPAB: 20041019

NOVELTY - A composition (C1) for decreasing **ghrelin** levels in person or other mammal comprises **hydroxycitric** acid.

ACTIVITY - Anorectic; Antilipemic.

MECHANISM OF ACTION - None given.

USE - For reducing and maintaining body weight in a person or other mammal (claimed).

ADVANTAGE - Decreases feelings of hunger and regulates food intake, increases fat metabolism for effective weight management. The composition provides the additional advantage of alleviating symptoms in human and other mammals and improving other health factors e.g. increases serum serotonin levels; niacin bound chromium complex helps to reduce LDL cholesterol in humans by an average of 14%; gymnemic acid facilitates insulin release from beta cells into the blood stream by increasing beta cell membrane permeability and inhibits the absorption of sugar molecules in the intestines during digestion thus reduces blood sugar levels; green tea extract protects carcinogens, reduces cholesterol levels and blocks the attachment of the bacteria associated with dental cavities to the teeth.

Dwg.0/0

TECH US 2004186181 A1UPTX: 20041019

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Composition: **Hydroxycitric** acid is bound to group IA/IIA metal (e.g. Na, K, Cs, Fr, Be, Mg, Ca, Sr, Ba, or Ra) to form single, double or triple salt (preferably Ca or K salts) further comprises gymnemic acid (10 - 1000, preferably 100 mg), green tea extract (20 - 2000 mg) or chromium (preferably niacin-bound chromium) (10 - 1000 micrograms). The green tea extract comprises epigallocatechin gallate, caffeine and theanine (preferably epigallocatechin gallate (400 mg)).

TECHNOLOGY FOCUS - BIOLOGY - Preferred Components: **Hydroxycitric** acid is derived from plant Garcinia cambogia. Gymnemic acid is derived from plant Gymnemia sylvestre .

ABEX US 2004186181 A1UPTX: 20041019

ADMINISTRATION - The dosage is 900-4500 (preferably 2000 - 3500 especially 2700 -2800) mg (claimed) three times a day approximately 30 - 60 minutes before meal. The composition is administered orally in the form of dietary supplements e.g. pill, tablet, capsule, lozenge, gum, liquid, or food beverage products.

FS CPI

FA AB; DCN

MC CPI: B04-A08C2; B04-A10; B05-A03B; B06-A01; B06-D09; B07-A02A; B10-B02J; B10-C02; B14-D02A2; B14-E12; B14-F09; B14-J03

=> FILE HCAPLU

FILE 'HCAPLUS' ENTERED AT 16:59:32 ON 31 AUG 2006

FILE COVERS 1907 - 31 Aug 2006 VOL 145 ISS 10
FILE LAST UPDATED: 30 Aug 2006 (20060830/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE L26

L2	32	SEA FILE=REGISTRY ABB=ON (27750-10-3/BI OR 7440-47-3/BI OR 132436-67-0/BI OR 185196-38-7/BI OR 213385-58-1/BI OR 304853-26-7/BI OR 3081-61-6/BI OR 449158-84-3/BI OR 58-08-2/BI OR 59-67-6/BI OR 64913-19-5/BI OR 7439-93-2/BI OR 7439-95-4/BI OR 7440-09-7/BI OR 7440-14-4/BI OR 7440-23-5/BI OR 7440-24-6/BI OR 7440-39-3/BI OR 7440-41-7/BI OR 7440-46-2/BI OR 7440-70-2/BI OR 7440-73-5/BI OR 760962-71-8/BI OR 761426-32-8/BI OR 761426-33-9/BI OR 761426-34-0/BI OR 761426-35-1/BI OR 761426-36-2/BI OR 761426-37-3/BI OR 761458-24-6/BI OR 762247-04-1/BI OR 989-51-5/BI)
L3	12	SEA FILE=REGISTRY ABB=ON L2 AND SALT
L4	1	SEA FILE=REGISTRY ABB=ON L2 AND GHRELIN
L5	1	SEA FILE=REGISTRY ABB=ON 27750-10-3
L6	18	SEA FILE=REGISTRY ABB=ON L2 NOT (L3 OR L4 OR L5)
L7	12	SEA FILE=REGISTRY ABB=ON L6 AND 1-2/M
L8	11	SEA FILE=REGISTRY ABB=ON L7 NOT 1/CR
L9	1957	SEA FILE=HCAPLUS ABB=ON L4 OR GHRELIN
L10	42	SEA FILE=HCAPLUS ABB=ON L3
L11	29	SEA FILE=HCAPLUS ABB=ON L5/D
L12	30162	SEA FILE=HCAPLUS ABB=ON L8/D
L13	4	SEA FILE=HCAPLUS ABB=ON L11 AND L12
L14	1	SEA FILE=HCAPLUS ABB=ON L9 AND (L10 OR L13)
L16	352	SEA FILE=HCAPLUS ABB=ON L9(3A)(DECREAS? OR LOW?)
L17	237	SEA FILE=HCAPLUS ABB=ON L5
L18	1	SEA FILE=HCAPLUS ABB=ON L16 AND L17
L20	2	SEA FILE=HCAPLUS ABB=ON L9 AND GARCINIA
L21	2	SEA FILE=HCAPLUS ABB=ON L14 OR L18 OR L20
L22	1	SEA FILE=HCAPLUS ABB=ON L16 AND (HYDROXYCITRIC? OR HYDROXY(W)CITRIC?)
L23	2	SEA FILE=HCAPLUS ABB=ON L21 OR L22
L24	19	SEA FILE=HCAPLUS ABB=ON (L10 OR L13) AND WEIGHT?
L25	14	SEA FILE=HCAPLUS ABB=ON L24 AND PHARMA?/SC,SX
L26	15	SEA FILE=HCAPLUS ABB=ON L23 OR L25

=> FILE MEDLINE
FILE 'MEDLINE' ENTERED AT 16:59:44 ON 31 AUG 2006

FILE LAST UPDATED: 30 Aug 2006 (20060830/UP). FILE COVERS 1950 TO DATE.

On December 11, 2005, the 2006 MeSH terms were loaded.

The MEDLINE reload for 2006 is now (26 Feb.) available. For details on the 2006 reload, enter HELP RLOAD at an arrow prompt (=>). See also:

http://www.nlm.nih.gov/mesh/
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

OLDMEDLINE is covered back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2006 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

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=> D QUE L34
L2            32 SEA FILE=REGISTRY ABB=ON  (27750-10-3/BI OR 7440-47-3/BI OR
                 132436-67-0/BI OR 185196-38-7/BI OR 213385-58-1/BI OR 304853-26
                 -7/BI OR 3081-61-6/BI OR 449158-84-3/BI OR 58-08-2/BI OR
                 59-67-6/BI OR 64913-19-5/BI OR 7439-93-2/BI OR 7439-95-4/BI OR
                 7440-09-7/BI OR 7440-14-4/BI OR 7440-23-5/BI OR 7440-24-6/BI
                 OR 7440-39-3/BI OR 7440-41-7/BI OR 7440-46-2/BI OR 7440-70-2/BI
                  OR 7440-73-5/BI OR 760962-71-8/BI OR 761426-32-8/BI OR
                 761426-33-9/BI OR 761426-34-0/BI OR 761426-35-1/BI OR 761426-36
                 -2/BI OR 761426-37-3/BI OR 761458-24-6/BI OR 762247-04-1/BI OR
                 989-51-5/BI)
L4             1 SEA FILE=REGISTRY ABB=ON  L2 AND GHRELIN
L5             1 SEA FILE=REGISTRY ABB=ON  27750-10-3
L32         1733 SEA FILE=MEDLINE ABB=ON  L4 OR GHRELIN
L33          116 SEA FILE=MEDLINE ABB=ON  L5 OR HYDROXYCITRIC?
L34            0 SEA FILE=MEDLINE ABB=ON  L32 AND L33


=> FILE HCAPLU
FILE 'HCAPLUS' ENTERED AT 16:59:57 ON 31 AUG 2006
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FILE COVERS 1907 - 31 Aug 2006 VOL 145 ISS 10
FILE LAST UPDATED: 30 Aug 2006 (20060830/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D L26 BIB ABS IND HITSTR 1-15

L26 ANSWER 1 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:269132 HCAPLUS
DN 144:338068
TI Composition and method to optimize and customize nutritional supplement formulations by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes
IN Blum, Kenneth; Meshkin, Brian; Downs, Bernard William
PA USA
SO U.S. Pat. Appl. Publ., 80 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2006062859	A1	20060323	US 2005-197980	20050805
PRAI US 2004-599829P	P	20040805		

AB The invention relates to a composition and custom business model and methods to measure genetic and metabolomic contributing factors affecting disease diagnosis, stratification, and prognosis, as well as the metabolism, efficacy and/or toxicity associated with specific vitamins, minerals, herbal supplements, homeopathic ingredients, and other ingredients for the purposes of customizing a subject's nutritional supplements with custom formulations to optimize health outcomes. For example, Synaptose formula comprised DLPA 2000 mg, various glyconutrients including, but not limited to one or more of glucose, fucose, mannose, galactose, xylose, N-acetylglucosamine, N-acetylgalactosamine, and N-acetylneuraminic acid (sialic acid), all of which can be present as either monosaccharides or complexed as oligo- and/or polysaccharides in various foodstuffs including but not limited to aloe, fenugreek, numerous species of medicinal mushrooms, western larch (primarily tree sap and bark), and many more glycoside-rich botanical substances. In addition, the formula contained arabinose, arabinogalactans, and other polyglycan-rich substances, L-glutamine 150 mg, L-tyrosine 750 mg, 5-hydroxytryptophan 100 mg, chromium salt up to 1000 μg or more, Rhodiola rosea 200 mg, passion flower 100 mg, vitamin B6 20 mg, magnolia flower 20 mg, minerals (calcium 275-750 mg, magnesium at least 100-750 mg, and potassium at least 250-2000 mg), and salts of (-)-hydroxycitric acid up to 3000 mg.
INCL 424725000; 424765000; 424769000; 435006000; 514002000; 514054000; 514171000
CC 63-4 (Pharmaceuticals)
Section cross-reference(s): 1, 17, 18
ST nutritional supplement optimization genomics metabolomics diagnosis metab therapy; glyconutrient supplement optimization genomics metabolomics diagnosis metab therapy; nutragenomics diagnosis metab therapy
IT Uncoupling protein
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(1, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(2, gene for, polymorphism in; optimization and customization of

nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Apolipoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(A-I, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Transport proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ABCC8 (ATP-binding cassette transporter sub-family C member 8), gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ACE, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ADRA2, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ADRA2A, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ALdB, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ANG, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ANKK1, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ANKK1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(APOE, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(AgRP, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Bdnf, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Natural products, pharmaceutical
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Berberis; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Natural products, pharmaceutical
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Bryonia; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(BsmI, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(C825T, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CART (cocaine- and amphetamine-regulated transcript), gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CART, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CNR1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CNRA4, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CNRA4, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(COMT, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ChREBP, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ChREBP, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Natural products, pharmaceutical
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Chamonlia; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(DAT1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(DBH, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(DRD2, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Muscular dystrophy
(Duchenne; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Dopamine receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(D1, gene for, polymorphism in; optimization and customization of

nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Dopamine receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (D1A, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Dopamine receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (D2, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Dopamine receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (D3, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Dopamine receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (D4, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Dopamine receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (D5, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Apolipoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study) (E, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study) (E23K, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT G protein-coupled receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (EDG-2 (endothelial differentiation gene 2), gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study) (EGR1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study) (ERBB2, polymorphism in; optimization and customization of nutritional

supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Edg2, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Egr-1, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT **Garcinia** mangostana
(Extract; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Immunophilins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(FKBP (FK 506-binding protein), FKBP5, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Natural products, pharmaceutical
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Ferrum Phos; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Fgfr2, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Fkbp5, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(FokI, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GAB1 (GRB2-associated binder 1), gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GABRA3, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to

disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GABRB3, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GFPT1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GFPT2, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Transport proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GLUT-4 (glucose transporter 4), gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GLUT4, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Gab1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Natural products, pharmaceutical
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Gelsemium; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**Ghrelin**, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HLA-DRB, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Histocompatibility antigens
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(HLA-DRB1, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HLA-DRB1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Heat-shock proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HSP 56, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HTR1A, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HTR1D, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HTR2A, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HTR2C, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HTT, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Hpcall, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ID2 (inhibitor of differentiation 2), gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(Id2, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study) (LNC2, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study) (LNC2, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study) (MAOA, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study) (MAOA, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study) (MGPAT, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study) (MGPAT, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Histocompatibility antigens
RL: BSU (Biological study, unclassified); BIOL (Biological study) (MHC (major histocompatibility complex), class II, β chain, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Glycoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study) (MOG (myelin oligodendrocyte glycoprotein), gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study) (MOG, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Glycoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study) (MOG4, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study) (MOG4, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Gene, animal
Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study) (MTHFR, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study) (Mc3R:UCP1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study) (Mc4R, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study) (NET, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Glutamate receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (NMDA-binding, NMDAR-1, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study) (NMDAR1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study) (NYP, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study) (OBR, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic

outcomes)
IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(PDGS, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(PDGS, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(POMC, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(PPARγ, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(PTPN1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(PTPN22, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Bone, disease
(Paget's; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Blood vessel, disease
(Raynaud's phenomenon; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Arthritis
(Reiter's syndrome; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(SREBP-1 (sterol regulatory element-binding protein 1), gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(STS, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Sgk, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Sgk1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(TCP-1 (T-complex protein 1), gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(TCP1, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(TDO2, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(adiponitrins; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(agouti-related, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Natural products, pharmaceutical
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(aloe; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Disease, animal
(arthropathy; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Mental and behavioral disorders
(attention deficit hyperactivity disorder; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification,

prognosis, metabolism, and therapeutic outcomes)
IT Natural products, pharmaceutical
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(belladonna; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Fats and Glyceridic oils, biological studies
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(borage seed; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Cartilage
(bovine; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Neurotrophic factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(brain-derived, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Proteoglycans, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(brevican, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(c-fos, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(c-fos, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(c-jun, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(c-jun, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(c-myc, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)
IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(c-myc, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Coral
(calcium; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Triterpenes
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(carboxy, boswellic acids; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Shark
(cartilage; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Uncaria tomentosa
(cat's claw; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Fats and Glyceridic oils, biological studies
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(currant, Ribes nigrum seed; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Mental and behavioral disorders
(depression; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(desnutrins; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Joint, anatomical
(disease; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Lipids, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(disorders; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Transport proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(dopamine transporter, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Fats and Glyceridic oils, biological studies
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(evening primrose; optimization and customization of nutritional

supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Boswellia
Hoodia
Hoodia gordonii
Lagerstroemia speciosa
Momordica charantia
Rhodiola
Sedum roseum
Vaccinium myrtillus
(extract; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Fats and Glyceridic oils, biological studies
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fish; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 5-HT receptors
Aggrecans
Cell adhesion molecules
Decorins
GABA receptors
Glucocorticoid receptors
Interleukin 10
Interleukin 1α
Interleukin 1β
Interleukin 8
Leptin receptors
Potassium channel
Ras proteins
Tumor necrosis factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Vitamin D receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(genes for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Disease, animal
(genetic; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Fats and Glyceridic oils, biological studies
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(grape seed; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Tea products
(green; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Tinospora cordifolia

(gulvel; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(hippocalcin-like 1, gene for, polymorphism in; optimization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Aconitum
RL: BIOL (Biological study); USES (Uses)
(homeopathic preparation; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Drug delivery systems
(homeopathic; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Chromosome
(human 2, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Collagens, biological studies
Gelatins, biological studies
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hydrolyzates; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Opioids
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Syzygium cumini
(jambolan; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gymnema sylvestre
(leaf; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Embryophyta
(medicinal plant; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Mushroom
(medicinal; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Pituitary hormone receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(melanocortin receptor 3, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Pituitary hormone receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(melanocortin receptor 4, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Disease, animal
(metabolomic; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Perfumes
(myrrh, Guggul; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Disease, animal
(neurogenobolic deficiency syndrome; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Diabetes mellitus
(non-insulin-dependent; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Transport proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(norepinephrine transporter, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ob, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Resins
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(olibanum, Salai Guggal; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Acanthopanax senticosus
Alcoholism
Ananas comosus
Anxiety
Appetite depressants
Arthritis
Asthma
Astragalus
Autoimmune disease
Bacopa monnieri
Borago officinalis
Boswellia serrata
Camellia sinensis
Cardiovascular system, disease
Centella asiatica
Citrus aurantium
Commiphora mukul

Curcuma longa
Diabetes mellitus
Diagnosis
Dietary supplements
Dioscorea
Dioscorea villosa
Disease, animal
Drug delivery systems
Drug dependence
Drug toxicity
Echinacea
Flaxseed
Ganoderma lucidum
Genetic polymorphism
Ginkgo
Ginkgo biloba
Harpagophytum procumbens
Human
Hypericum perforatum
Hypertension
Inflammation
Insomnia
Larix
Lentinula edodes
Ligustrum
Linum usitatissimum
Lupus erythematosus
Lyme disease
Magnolia
Metabolism, animal
Mutation
Neoplasm
Obesity
Oenothera
Oenothera biennis
Osteoarthritis
Osteoporosis
Oxidative stress, biological
Pain
Panax
Panax ginseng
Panax quinquefolium
Parthenium hysterophorus
Passiflora
Perna canaliculus
Perna viridis
Phellodendron amurense
Piper methysticum
Primula
Pterocarpus marsupium
Rheumatic fever
Rheumatoid arthritis
Rhododendron
Ribes nigrum
Salix alba
Schisandra
Simulation and Modeling
Sleep disorders
Stress, animal
Tabebuia

Therapy
Tonga
Trigonella foenum-graecum
Tripterygium wilfordii
Urtica dioica
Valeriana
Valeriana officinalis
Zingiber officinale
(optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT DNA
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Carbohydrate metabolism disorders
Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Amino acids, biological studies
Collagens, biological studies
Gelatins, biological studies
Linseed oil
Mineral elements, biological studies
Monosaccharides
Natural products, pharmaceutical
Oligosaccharides, biological studies
Polysaccharides, biological studies
Tannins
Vitamins
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Tobacco smoke
(overcoming dependence of; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Rheumatic diseases
(palindromic; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Mental and behavioral disorders
(post-traumatic stress disorder; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Ovarian cycle
(premenstrual syndrome; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Hair
Mental activity

Nail (anatomical)
Skin
(promotion of health of; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Arthritis
(reactive; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Vitis vinifera
(seeds; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Genetic polymorphism
(single nucleotide; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(sortilin-1, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Neurotransmitters
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(synthesis precursors; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Carboxylic acids, biological studies
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(triterpene, boswellic acids; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Neurotensin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 1, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Fibroblast growth factor receptors
Neurotensin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 2, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT1A, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT1D, gene for, polymorphism in; optimization and customization

of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT2A, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT2B, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT2C, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT4, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT7, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Angiotensin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type AT1, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Cannabinoid receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type CB1, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Collagens, biological studies
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(type II; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Blood vessel, disease
Inflammation
(vasculitis, hypersensitivity; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Interferons
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(α, gene for, polymorphism in; optimization and customization of

nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Adrenoceptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (α2, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Adrenoceptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (α2A, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Adrenoceptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (β-, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study) (β3AR, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Adrenoceptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (β3, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Peroxisome proliferator-activated receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (γ, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT Peroxisome proliferator-activated receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study) (γ2, gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 54-11-5, Nicotine
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(dependence to and treatment with; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 17031-92-4, Calcium pyrophosphate dihydrate
RL: BSU (Biological study, unclassified); BIOL (Biological study) (disorder; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 9000-83-3, ATPAse 9012-25-3, Catechol O-methyltransferase 9013-38-1, Dopamine β-hydroxylase 9014-51-1, Tryptophan 2,3-dioxygenase 9015-82-1, Angiotensin converting enzyme 9025-62-1, Steroid sulfatase

9028-86-8, Aldehyde dehydrogenase 9029-96-3, Glycerol 3-phosphate acyltransferase 9030-45-9, Glutamine-fructose 6-phosphate amidotransferase 9031-91-8, Glucosamine 6-phosphate acetyltransferase 9035-51-2, Cytochrome P 450, biological studies 9041-46-7, 11β-Hydroxysteroid dehydrogenase, type 1 66796-54-1, Proopiomelanocortin 71822-25-8, Methylene tetrahydrofolate reductase 82785-45-3, Neuropeptide Y 88402-55-5, Prodynorphin 90880-95-8, Proenkephalin 178037-70-2, Protein kinase SGK-1 300865-11-6, Protein tyrosine phosphatase PTPN1 301156-78-5, Protein tyrosine phosphatase Lyp **304853-26-7, Ghrelin** 330597-62-1, CYP2D6
RL: BSU (Biological study, unclassified); BIOL (Biological study) (gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 9000-81-1, Acetylcholinesterase 9001-08-5, Cholinesterase
RL: BSU (Biological study, unclassified); BIOL (Biological study) (inhibitors; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 51-84-3, Acetylcholine, biological studies 39379-15-2, Neurotensin
RL: BSU (Biological study, unclassified); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 50-81-7, Vitamin C, biological studies 50-99-7, D-Glucose, biological studies 53-43-0, DHEA 54-47-7, Pyridoxal-5'-phosphate 56-85-9, L-Glutamine, biological studies 56-86-0, L-Glutamic acid, biological studies 58-86-6, Xylose, biological studies 59-23-4, Galactose, biological studies 59-30-3, Folic acid, biological studies 59-43-8, Thiamine, biological studies 59-92-7, biological studies 60-18-4, L-Tyrosine, biological studies 62-49-7, Choline 63-91-2, L-Phenylalanine, biological studies 66-84-2, Glucosamine hydrochloride 67-68-5, DMSO, biological studies 67-71-0, Methylsulfonylmethane 73-22-3, L-Tryptophan, biological studies 73-31-4, Melatonin 94-07-5, Synephrine 117-39-5, Quercetin 131-48-6, N-Acetylneuraminic acid 147-81-9, Arabinose 150-30-1, DLPA 299-42-3, Ephedrine 300-62-9D, Amphetamine, derivs. 328-38-1, D-Leucine 501-52-0, Hydrocinnamic acid 506-26-3, γ-Linolenic acid 541-15-1, L-Carnitine 673-06-3, D-Phenylalanine 989-51-5, EGCG 1406-18-4, Vitamin E 1811-31-0, N-Acetylgalactosamine 2438-80-4, Fucose 3416-24-8, Glucosamine 3458-28-4, D-Mannose 4350-09-8, 5-Hydroxytryptophan 7439-95-4, Magnesium, biological studies 7439-96-5, Manganese, biological studies 7440-09-7, Potassium, biological studies 7440-47-3D, Chromium, salts 7440-70-2, Calcium, biological studies 7512-17-6, N-Acetylglucosamine 7693-13-2, Calcium citrate 7778-49-6, Potassium citrate 7779-25-1, Magnesium citrate 8059-24-3, Vitamin B6 9001-73-4, Papain 9004-61-9, Hyaluronic acid 9007-28-7, Chondroitin sulfate 9036-66-2, Arabinogalactan 12001-76-2, Vitamin B complex 13539-59-8, Cinnamin 14007-45-5, Potassium aspartate 16351-10-3, Manganese ascorbate 18962-61-3, Magnesium aspartate 21059-46-1, Calcium aspartate 27750-10-3, (-)-Hydroxycitric acid 27750-10-3D, (-)-Hydroxycitric acid, salts 27774-13-6, Vanadyl sulfate 29031-19-4, Glucosamine sulfate 29908-03-0, S-Adenosyl-L-methionine 31271-07-5, γ-Mangostin 39345-92-1, Chromium chloride 40816-51-1 64660-84-0, Cetyl-M 102518-79-6, Huperzine A 140947-78-0 150977-36-9, Bromelain 316129-64-3, Protykin 880087-81-0 880150-86-7, Boswellin 880150-96-9, Sierrasil 880150-98-1, AlgaeCal 880151-04-2, Synaptamine 880260-05-9, Synaptose

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT 50-67-9, Serotonin, biological studies 51-61-6, Dopamine, biological studies 56-12-2, γ-Aminobutyric acid, biological studies 3040-38-8, Acetylcarnitine
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(precursors; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

IT **304853-26-7, Ghrelin**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(gene for, polymorphism in; optimization and customization of nutritional supplement by measuring genetic and metabolomic contributing factors to disease diagnosis, stratification, prognosis, metabolism, and therapeutic outcomes)

RN 304853-26-7 HCAPLUS
CN Ghrelin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L26 ANSWER 2 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:1330533 HCAPLUS
DN 144:74811
TI New dietary supplement composition for obesity and inflammation
IN Gokaraju, Ganga Raju; Gokaraju, Rama Raju; Gottumukkala, Venkata Subbaraju; Somepalli, Venkateswarlu
PA India
SO U.S. Pat. Appl. Publ., 6 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

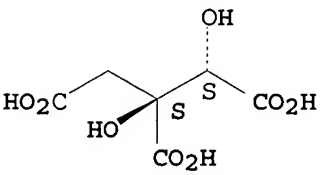
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2005282772	A1	20051222	US 2005-155486	20050620
PRAI US 2004-580723P	P	20040621		

AB The present invention relates to dietary supplement phytochem. compns., comprising calcium, potassium double salt of (-)-hydroxycitric acid and glucosamine hydrochloride, and optionally boswellic acids, curcuminoids, 5-hydroxytryptophan, chondroitin sulfate and L-carnitine. The claimed compns. are useful in dietary supplements, nutritional supplements or pharmaceutical prepns. for **weight** loss and inflammatory epidemics. A phytochem. composition was prepared by mixing unit doses of the following components: calcium, potassium double salt of (-)-hydroxycitric acid (4 g), glucosamine hydrochloride (1.5 g) and boswellic acids (300 mg).

IC ICM A61K031-737
ICS A61K031-7008; A61K031-19
INCL 514054000; 514574000; 514062000; 514559000; 514419000
CC 63-6 (**Pharmaceuticals**)
Section cross-reference(s): 1, 17
ST dietary supplement obesity inflammation treatment; hydroxycitric acid glucosamine boswellic acid dietary supplement
IT Triterpenes
RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(carboxy, boswellic acids; new dietary supplement composition for obesity and inflammation)

IT Ketones, biological studies
RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(diketones, unsatd., curcuminoids; new dietary supplement composition for obesity and inflammation)
IT Anti-inflammatory agents
Antiobesity agents
Antioxidants
Arthritis
Beverages
Boswellia serrata
Cardiovascular system, disease
Cosmetics
Curcuma longa
Dietary supplements
Inflammation
Obesity
(new dietary supplement composition for obesity and inflammation)
IT Carboxylic acids, biological studies
RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(triterpene, boswellic acids; new dietary supplement composition for obesity and inflammation)
IT 66-84-2, Glucosamine hydrochloride 541-15-1, L-Carnitine 4350-09-8, 5-Hydroxytryptophan 7512-17-6, N-Acetyl glucosamine 9007-28-7, Chondroitin sulfate 27750-10-3D, (-)-Hydroxycitric acid, salts 29031-19-4, Glucosamine sulfate **449158-84-3** 871707-10-7
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(new dietary supplement composition for obesity and inflammation)
IT **449158-84-3**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(new dietary supplement composition for obesity and inflammation)
RN 449158-84-3 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x Ca

●x K

L26 ANSWER 3 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:902669 HCAPLUS

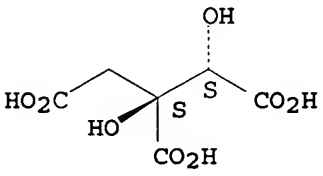
DN 143:235461
TI Double salts of (-)-hydroxycitric acid with an amine and a group IIA metal
IN Gokaraju, Ganga Raju; Gokaraju, Rama Raju; Gottumukkala, Venkata Subbaraju; Somepalli, Venkateswarlu; Pratha, Sridhar
PA India
SO PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005076747	A2	20050825	WO 2004-IN45	20040217
	WO 2005076747	A3	20060330		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2005209445	A1	20050922	US 2003-516107	20041130
PRAI	WO 2004-IN45	W	20040217		

OS MARPAT 143:235461
AB This invention relates to novel double salt of (-)-hydroxycitric acid with an amine and zinc or a group II A metal. These compds. are stable and water soluble and are used as nutraceuticals, **weight** reducing agents and in beverages. Thus, calcium glucosamine double salt of (-)-hydroxycitric acid was prepared by the treatment of the acid with glucosamine and Ca(OH)2.
IC ICM C07C
CC 63-6 (**Pharmaceuticals**)
Section cross-reference(s): 17
ST amine hydroxycitric acid metal antiobesity prepn; group IIA metal hydroxycitrate antiobesity prepn
IT Beverages
Dietary supplements
(preparation of double salts of hydroxycitric acid with amine and group IIA metals)
IT Alcohols, uses
RL: NUU (Other use, unclassified); USES (Uses)
(preparation of double salts of hydroxycitric acid with amine and group IIA metals)
IT Obesity
(reduction; preparation of double salts of hydroxycitric acid with amine and group IIA metals)
IT Alkaline earth salts
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(with hydroxycitric acid; preparation of double salts of hydroxycitric acid with amine and group IIA metals)
IT 862895-72-5P 862895-73-6P 862895-74-7P 862895-75-8P 862895-76-9P 862895-77-0P 862895-78-1P 862895-79-2P
RL: FFD (Food or feed use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of double salts of hydroxycitric acid with amine and group IIA metals)

IT 67-64-1, Acetone, uses 75-05-8, Acetonitrile, uses 109-99-9, THF, uses
123-91-1, Dioxane, uses
RL: NUU (Other use, unclassified); USES (Uses)
(preparation of double salts of hydroxycitric acid with amine and group IIA metals)
IT 66-84-2, Glucosamine hydrochloride 546-93-0, Magnesium carbonate
1305-62-0, Calcium hydroxide, reactions 3416-24-8, Glucosamine
3486-35-9, Zinc carbonate 14838-15-4, Norephedrine 27750-10-3,
(-)-Hydroxycitric acid 106650-56-0, Sibutramine **449158-84-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of double salts of hydroxycitric acid with amine and group IIA metals)
IT **449158-84-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of double salts of hydroxycitric acid with amine and group IIA metals)
RN 449158-84-3 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x Ca

●x K

L26 ANSWER 4 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:259856 HCAPLUS
DN 142:322762
TI Enteric delivery of (-)-hydroxycitric acid
IN Clouatre, Dallas L.; Dunn, James M.
PA Glykon Technologies Group, LLC, USA
SO PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005025544	A1	20050324	WO 2004-US29471	20040910

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2538929 AA 20050324 CA 2004-2538929 20040910

PRAI US 2003-660805 A 20030911

WO 2004-US29471 W 20040910

AB The present invention provides enteric (-)-hydroxycitric acid (HCA) comprising HCA and one or more acid-resistant hydrophobic polymer, stable dosage unit forms, uses thereof, as well as methods of making the same. In particular, HCA and the salts, esters and amides of HCA according to the invention are delivered via enteric vehicles, such as enteric-coated tablets, and also enteric and enteric-coated capsules and soft gelatin capsules (softgels). Enteric coatings may be applied externally to the HCA-containing dosage unit form or, in the case of capsules and soft gelatin capsules, the enteric compound also may be incorporated into the gelatin shell to yield an HCA-containing dosage unit form of the invention. The HCA-containing compns. are protected against acid degradation, lactonization and undesirable ligand binding in select environments. The invention provides HCA-containing dosage unit forms useful to prevent or reduce the symptoms associated with a disease, disorder or condition such as obesity, **wt**. gain, hunger, hyperlipemia, and postprandial lipemia. For example, a hard shell capsule was filled with 500 mg potassium-calcium HCA and then coated with a formulation containing cellulose acetate phthalate 8.5%, di-Et phthalate 1.5%, acetone 45.0%, and denatured alc. 45.0%.

IC ICM A61K009-28
ICS A61K009-30; A61K009-32; A61K009-34; A61K009-36; A61K009-48; A61K009-66

CC 63-6 (**Pharmaceuticals**)
Section cross-reference(s): **1**

ST hydroxycitrate hydrophobic polymer enteric capsule tablet

IT Glycerides, biological studies
Monoglycerides
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(acetates; enteric delivery of hydroxycitric acid and derivs. for treatment of metabolic disorders)

IT Drug delivery systems
(capsules, enteric-coated; enteric delivery of hydroxycitric acid and derivs. for treatment of metabolic disorders)

IT Drug delivery systems
(capsules, soft, enteric-coated; enteric delivery of hydroxycitric acid and derivs. for treatment of metabolic disorders)

IT Antiobesity agents
Appetite depressants
Hypolipemic agents
(enteric delivery of hydroxycitric acid and derivs. for treatment of metabolic disorders)

IT Acrylic polymers, biological studies
Polyoxyalkylenes, biological studies
Shellac
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(enteric delivery of hydroxycitric acid and derivs. for treatment of metabolic disorders)

IT Coating materials
Drug delivery systems
(enteric; enteric delivery of hydroxycitric acid and derivs. for treatment of metabolic disorders)

IT Glycols, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(esters; enteric delivery of hydroxycitric acid and derivs. for treatment of metabolic disorders)

IT Lipids, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(reduction of blood lipids; enteric delivery of hydroxycitric acid and derivs. for treatment of metabolic disorders)

IT Hyperlipidemia
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(reduction of postprandial lipemia; enteric delivery of hydroxycitric acid and derivs. for treatment of metabolic disorders)

IT Hunger
Obesity
(reduction of symptoms associated with; enteric delivery of hydroxycitric acid
and derivs. for treatment of metabolic disorders)

IT Drug delivery systems
(tablets, enteric-coated; enteric delivery of hydroxycitric acid and derivs. for treatment of metabolic disorders)

IT 79-41-4D, Methacrylic acid, esters, polymers
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Eudragit; enteric delivery of hydroxycitric acid and derivs. for treatment of metabolic disorders)

IT 26780-50-7, Poly(glycolide-co-lactide)
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Resomer RG; enteric delivery of hydroxycitric acid and derivs. for treatment of metabolic disorders)

IT 27750-10-3, (-)-Hydroxycitric acid 27750-10-3D, (-)-Hydroxycitric acid, derivs. **64913-19-5 185196-38-7 213385-58-1 449158-84-3** 848047-98-3
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(enteric delivery of hydroxycitric acid and derivs. for treatment of metabolic disorders)

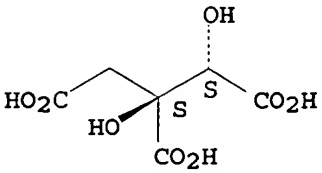
IT 50-21-5D, Lactic acid, polymers 57-55-6D, 1,2-Propanediol, β-cyclodextrin ethers 77-93-0, Triethyl citrate 77-94-1, Tributyl citrate 79-14-1D, Glycolic acid, polymers 84-66-2, Diethyl phthalate 102-76-1, Triacetin 110-16-7D, Maleic acid, ester with cellulose 7585-39-9, β-Cyclodextrin 7585-39-9D, β-Cyclodextrin, ethers with propanediol 9004-35-7D, ester with maleic acid 9004-38-0, Cellulose acetate phthalate 9004-57-3, Ethyl cellulose 9050-31-1, Hydroxypropyl methyl cellulose phthalate 10016-20-3, α-Cyclodextrin 17465-86-0, γ-Cyclodextrin 25322-68-3, Polyethylene glycol 53237-50-6 106392-12-5, Poloxamer
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(enteric delivery of hydroxycitric acid and derivs. for treatment of metabolic disorders)

IT 9012-83-3, Citrate lyase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(reduction of cytoplasmic; enteric delivery of hydroxycitric acid and derivs. for treatment of metabolic disorders)

IT **64913-19-5 185196-38-7 213385-58-1 449158-84-3**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(enteric delivery of hydroxycitric acid and derivs. for treatment of metabolic disorders)

RN 64913-19-5 HCAPLUS
CN Pentaric acid, 3-C-carboxy-2-deoxy-, sodium salt (9CI) (CA INDEX NAME)

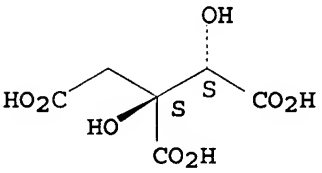
Absolute stereochemistry. Rotation (-).



●x Na

RN 185196-38-7 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, potassium salt (9CI) (CA INDEX NAME)

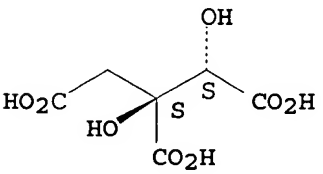
Absolute stereochemistry. Rotation (-).



●x K

RN 213385-58-1 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium salt (9CI) (CA INDEX NAME)

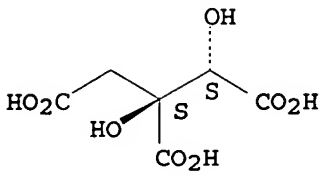
Absolute stereochemistry. Rotation (-).



●x Ca

RN 449158-84-3 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x Ca

●x K

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 5 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:36560 HCAPLUS
DN 142:127634
TI Treating cachexia and excessive catabolism with (-)-hydroxycitric acid
IN Clouatre, Dallas L.
PA USA
SO U.S. Pat. Appl. Publ., 10 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2005009919	A1	20050113	US 2003-616321	20030707
WO 2005007152	A1	20050127	WO 2004-US21542	20040702

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

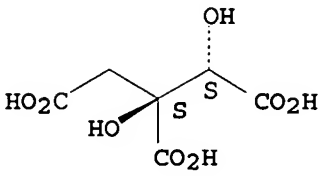
PRAI US 2003-616321 A 20030707

AB (-)-Hydroxycitric acid (including the forms of its various salts) is useful for treating and ameliorating cachexia, health-threatening catabolism and unhealthful **weight** loss, such as is characteristic of sarcopenia. The dosage will depend on factors such as the starting **weight** of the individual and the percentage of the calories in the diet derived from fats. On a 30 percent fat diet, an efficacious daily dosage for most individuals will be between 250 mg and 3 g per day. It may prove beneficial to deliver the desired dosage only once per day, preferably prior to the noon meal. The **weight**-gain effects of HCA are compromised by the actions compds. such as caffeine and ephedrine, hence these should be avoided. Due to the biphasic characteristics of HCA, there is an obvious overlap between dosages that can lead to

weight gain and the higher dosages that can lead to **weight** loss in those who are above their ideal body wts. There is little or no evidence that HCA ingested even in quite large amts. causes significant **weight** loss in individuals who are at or below their idea wts. or exhibit a body mass index (BMI) at or below 20. It is to be expected that dosage will need to be matched to the current state of a given individual suffering from cachexia, catabolism or sarcopenia.

IC ICM A61K031-19
ICS A61K031-366
INCL 514574000; 514460000
CC 1-12 (**Pharmacology**)
ST cachexia catabolism **wt** loss sarcopenia treatment hydroxycitrate
IT Appetite
Cachexia
(cachexia and excessive catabolism treatment with (-)-hydroxycitric acid)
IT Metabolism
(catabolic; cachexia and excessive catabolism treatment with (-)-hydroxycitric acid)
IT Drug delivery systems
(controlled-release; cachexia and excessive catabolism treatment with (-)-hydroxycitric acid)
IT Body **weight**
(loss; cachexia and excessive catabolism treatment with (-)-hydroxycitric acid)
IT Drug delivery systems
(tablets; cachexia and excessive catabolism treatment with (-)-hydroxycitric acid)
IT 50-22-6, Corticosterone 9004-10-8, Insulin, biological studies 169494-85-3, Leptin
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(cachexia and excessive catabolism treatment with (-)-hydroxycitric acid)
IT 27750-10-3, (-)-Hydroxycitric acid 27750-10-3D, (-)-Hydroxycitric acid, esters amides, and salts 27750-13-6, (-)-Hydroxycitric acid lactone **64913-19-5 132436-67-0 185196-38-7 213385-58-1 449158-84-3**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cachexia and excessive catabolism treatment with (-)-hydroxycitric acid)
IT **64913-19-5 132436-67-0 185196-38-7 213385-58-1 449158-84-3**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cachexia and excessive catabolism treatment with (-)-hydroxycitric acid)
RN 64913-19-5 HCAPLUS
CN Pentaric acid, 3-C-carboxy-2-deoxy-, sodium salt (9CI) (CA INDEX NAME)

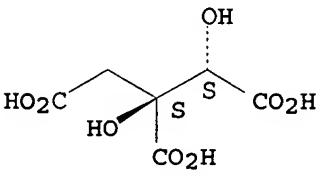
Absolute stereochemistry. Rotation (-).



●x Na

RN 132436-67-0 HCAPLUS
CN D-threo-Pentaric acid, 3-C-carboxy-2-deoxy-, magnesium salt (9CI) (CA INDEX NAME)

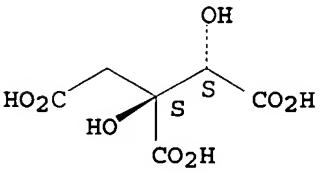
Absolute stereochemistry. Rotation (-).



●x Mg

RN 185196-38-7 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, potassium salt (9CI) (CA INDEX NAME)

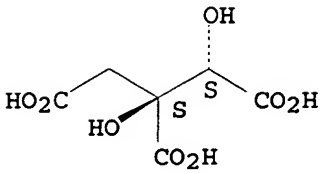
Absolute stereochemistry. Rotation (-).



●x K

RN 213385-58-1 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium salt (9CI) (CA INDEX NAME)

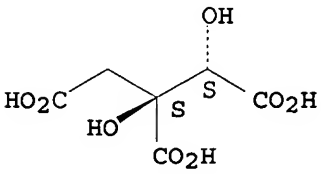
Absolute stereochemistry. Rotation (-).



●x Ca

RN 449158-84-3 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x Ca

●x K

L26 ANSWER 6 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:1059147 HCAPLUS
DN 142:43775
TI Method and composition for stable and controlled delivery of (-)-hydroxycitric acid
IN Clouatre, Dallas L.; Dunn, James M.
PA Glykon Technologies Group, Llc, USA
SO PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004105733	A1	20041209	WO 2004-US17187	20040528

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,

EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2527133 AA 20041209 CA 2004-2527133 20040528
EP 1633328 A1 20060315 EP 2004-753908 20040528
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK
US 2006141030 A1 20060629 US 2005-287905 20051128
PRAI US 2003-447992 A 20030529
WO 2004-US17187 W 20040528

AB The present invention provides stable encapsulated (-)-hydroxycitric acid ('HCA')-containing compns. and methods of making the same. A method is provided by which the hygroscopic salts of HCA in their relatively pure and active forms, including especially the potassium salt, but also including the sodium salt, are rendered non-hygroscopic and stable (i.e., not prone to lactonization, not readily subject to attachment to ligands which inhibit absorption or lead to excretion, and so forth) such that these HCA salts might be included in dry delivery formats, liquid delivery and in controlled-release vehicles. The nonhygroscopic salts of HCA and its derivs. likewise may be protected against acid degradation, lactonization and undesirable ligand binding when exposed to acidic environments or other challenging conditions. The method taught herein can be employed to reduce the polar/ionic qualities of HCA salts and derivs. when presented to the intestinal lumen to provide advantages in absorption.

IC ICM A61K009-20
CC 63-6 (**Pharmaceuticals**)
Section cross-reference(s): **1**
ST hydroxycitrate stable controlled delivery
IT Acrylic polymers, biological studies
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Eastacryl; method and composition for stable and controlled delivery of (-)-hydroxycitric acid)
IT Lipids, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(blood; method and composition for stable and controlled delivery of (-)-hydroxycitric acid)
IT Drug delivery systems
(caplets; method and composition for stable and controlled delivery of (-)-hydroxycitric acid)
IT Drug delivery systems
(capsules; method and composition for stable and controlled delivery of (-)-hydroxycitric acid)
IT Drug delivery systems
(controlled-release; method and composition for stable and controlled delivery of (-)-hydroxycitric acid)
IT Drug delivery systems
(enteric; method and composition for stable and controlled delivery of (-)-hydroxycitric acid)
IT Metabolism, animal
(fat; method and composition for stable and controlled delivery of (-)-hydroxycitric acid)
IT Body **weight**
(loss; method and composition for stable and controlled delivery of (-)-hydroxycitric acid)
IT Appetite depressants
Beverages
Binders
Biological transport
Human

Hygroscopicity
Intestine
Lubricants
Permeation enhancers
Stability
(method and composition for stable and controlled delivery of (-)-hydroxycitric acid)

IT Gelatins, biological studies
Kaolin, biological studies
Polyesters, biological studies
Polyoxyalkylenes, biological studies
Polyurethanes, biological studies
Shellac
Waxes
Zeins
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(method and composition for stable and controlled delivery of (-)-hydroxycitric acid)

IT Drug delivery systems
(microcapsules; method and composition for stable and controlled delivery of (-)-hydroxycitric acid)

IT Plasticizers
(polyacrylate; method and composition for stable and controlled delivery of (-)-hydroxycitric acid)

IT Hyperlipidemia
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(postprandial; method and composition for stable and controlled delivery of (-)-hydroxycitric acid)

IT Drug delivery systems
(powders; method and composition for stable and controlled delivery of (-)-hydroxycitric acid)

IT Drug delivery systems
(slow-release; method and composition for stable and controlled delivery of (-)-hydroxycitric acid)

IT Drug delivery systems
(sustained-release; method and composition for stable and controlled delivery of (-)-hydroxycitric acid)

IT Drug delivery systems
(tablets; method and composition for stable and controlled delivery of (-)-hydroxycitric acid)

IT Fats and Glyceridic oils, biological studies
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(vegetable, hydrogenated; method and composition for stable and controlled delivery of (-)-hydroxycitric acid)

IT Oils
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(volcanic; method and composition for stable and controlled delivery of (-)-hydroxycitric acid)

IT 9003-20-7, Polyvinyl acetate
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Kollicoat SR; method and composition for stable and controlled delivery of (-)-hydroxycitric acid)

IT 9012-83-3, Citrate lyase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; method and composition for stable and controlled delivery of (-)-hydroxycitric acid)

IT 57-11-4, Stearic acid, biological studies 57-55-6, Propylene glycol, biological studies 77-93-0, Triethyl citrate 79-10-7D, Acrylic acid, copolymers 79-10-7D, Acrylic acid, polymers 79-41-4D, Methacrylic acid, copolymers 109-43-3, Dibutyl sebacate 127-09-3, Sodium acetate 143-19-1, Sodium oleate 151-21-3, Sodium lauryl sulfate, biological studies 328-39-2, Leucine 532-32-1, Sodium benzoate 557-04-0, Magnesium stearate 822-16-2, Sodium stearate 1592-23-0, Calcium stearate 3097-08-3, Magnesium lauryl sulfate 4070-80-8, Pruv 7647-14-5, Sodium chloride, biological studies 7757-93-9, Dicalcium phosphate 7758-87-4, Tricalcium phosphate 9000-11-7, Carboxy methyl cellulose 9002-86-2, Polyvinyl chloride 9002-88-4, Polyethylene 9002-89-5 9002-96-4, d-α-Tocopheryl polyethylene glycol succinate 9003-07-0, Polypropylene 9003-21-8, Polymethyl acrylate 9003-39-8, Polyvinylpyrrolidone 9003-42-3, Polyethylmethacrylate 9003-44-5, Polyvinyl isobutyl ether 9003-63-8, Polybutyl methacrylate 9004-34-6, Cellulose, biological studies 9004-36-8, Cellulose acetate butyrate 9004-38-0, Cellulose acetate phthalate 9004-39-1, Cellulose acetate propionate 9004-44-8D, Cellulose phthalate, hydroxymethylpropylmethyl derivative 9004-48-2, Cellulose propionate 9004-57-3, Ethyl cellulose 9004-64-2, Hydroxypropyl cellulose 9004-65-3, Hydroxypropylmethyl cellulose 9004-67-5, Methylcellulose 9005-25-8, Potato starch, biological studies 9011-14-7, Polymethylmethacrylate 9011-15-8, Polyisobutyl methacrylate 9012-09-3 9050-31-1, Hydroxypropyl methylcellulose phthalate 9063-38-1 10043-35-3, Boric acid, biological studies 14807-96-6, Talc, biological studies 25038-59-9, biological studies 25087-17-6, Polyhexyl methacrylate 25189-01-9, Polyphenyl methacrylate 25322-68-3, Polyethylene oxide 25322-68-3D, Peg, conjugated 25719-52-2, Polylauryl methacrylate 25986-77-0, Polyoctadecyl acrylate 26009-03-0, Polyglycolic acid 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Polylactic acid 26124-32-3, Polyisopropyl acrylate 26124-68-5, Polyglycolic acid 26335-74-0, Polyisobutyl acrylate 31566-31-1, Glycerol monostearate 37200-12-7, Polyisodecyl methacrylate 53237-50-6 74811-65-7, Primellose 596795-01-6, Kollicoat IR
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(method and composition for stable and controlled delivery of (-)-hydroxycitric acid)

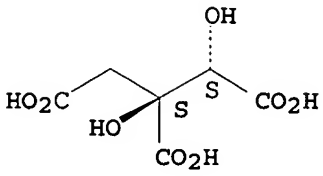
IT 8030-84-0, HCActive 27750-10-3, (-)-Hydroxycitric acid **185196-38-7 213385-58-1 449158-84-3**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(method and composition for stable and controlled delivery of (-)-hydroxycitric acid)

IT **185196-38-7 213385-58-1 449158-84-3**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(method and composition for stable and controlled delivery of (-)-hydroxycitric acid)

RN 185196-38-7 HCAPLUS

CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, potassium salt (9CI) (CA INDEX NAME)

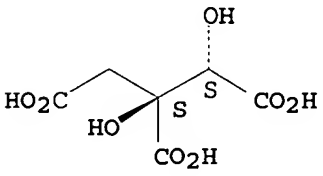
Absolute stereochemistry. Rotation (-).



●x K

RN 213385-58-1 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium salt (9CI) (CA INDEX NAME)

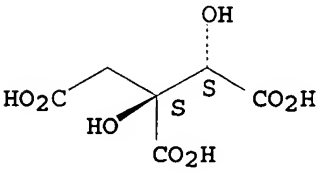
Absolute stereochemistry. Rotation (-).



●x Ca

RN 449158-84-3 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x Ca

●x K

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 7 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:1015841 HCAPLUS
DN 142:5805

TI A novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight** loss.
IN Philip, Samuel; Somasundaram, Saravanan; Meyyappan, Thangaraj
PA Indfrag Limited, India
SO PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004100682	A1	20041125	WO 2003-IN192	20030519
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003241151	A1	20041203	AU 2003-241151	20030519
US 2004259937	A1	20041223	US 2004-822867	20040413
PRAI WO 2003-IN192	A	20030519		

AB The present invention relates to a novel composition of complex metal salt of garcinia acid comprising (-)-hydroxycitric acid (HCA), the lactone of HCA and citric acid, and a mixture of either a penta (5), tetra (4), triple (3) or double (2) metal ions, for use in dietary supplements, nutraceuticals, food products and beverages to promote **weight** loss. In the said composition the concentration of HCA is 40-75 %, the Lactone of HCA 0.1-30 % and
citric acid 1-5 %, the rest being the metal ions selected from sodium, potassium, calcium, magnesium and/or zinc. The present invention also relates to the use of said composition in dietary supplements, nutraceuticals, food products and beverages, to promote **weight** loss and a process for preparing the said composition
IC ICM A23L002-78
CC 17-6 (Food and Feed Chemistry)
Section cross-reference(s): 18, **63**
ST garcinia acid metal salt food additive antiobesity reducing diet
IT Antiobesity agents
Dietary supplements
Food additives
(a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight** loss.)
IT Beverages
(additives; a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight** loss.)
IT Food
(dietetic; a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight** loss.)
IT Garcinia cambogia
(fruit rind water extract; a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight** loss.)

IT Bicarbonates
Carbonates, biological studies
Hydroxides (inorganic)
Oxides (inorganic), biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(of alkali- and alkaline earth metals; a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight** loss.)

IT Phenols, biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(polyphenols, nonpolymeric, antioxidants; a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight** loss.)

IT Antioxidants
(polyphenols; a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight** loss.)

IT Diet
(reducing; a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight** loss.)

IT 7782-99-2, Sulfurous acid, biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight** loss.)

IT 27750-10-3P, (-)-Hydroxycitric acid
RL: FFD (Food or feed use); PUR (Purification or recovery); RCT (Reactant); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight** loss.)

IT 27750-13-6P, (-)-Hydroxycitric acid lactone
RL: FFD (Food or feed use); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight** loss.)

IT **7439-95-4DP**, Magnesium, garcinia acid salts **7440-09-7DP**, Potassium, garcinia acid salts **7440-23-5DP**, Sodium, garcinia acid salts 7440-66-6DP, Zinc, garcinia acid salts **7440-70-2DP**, Calcium, garcinia acid salts **27750-10-3DP**, Garcinia acid, metal salts
RL: FFD (Food or feed use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight** loss.)

IT **7439-95-4DP**, Magnesium, garcinia acid salts **7440-09-7DP**, Potassium, garcinia acid salts **7440-23-5DP**, Sodium, garcinia acid salts **7440-70-2DP**, Calcium, garcinia acid salts **27750-10-3DP**, Garcinia acid, metal salts
RL: FFD (Food or feed use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(a novel complex metal salt of garcinia acid, a process for preparing the same and use thereof as a dietary additive for promoting **weight** loss.)

RN 7439-95-4 HCAPLUS

CN Magnesium (8CI, 9CI) (CA INDEX NAME)

Mg

RN 7440-09-7 HCAPLUS
CN Potassium (8CI, 9CI) (CA INDEX NAME)

K

RN 7440-23-5 HCAPLUS
CN Sodium (8CI, 9CI) (CA INDEX NAME)

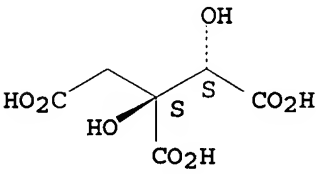
Na

RN 7440-70-2 HCAPLUS
CN Calcium (8CI, 9CI) (CA INDEX NAME)

Ca

RN 27750-10-3 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 8 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:780373 HCAPLUS
DN 141:289062
TI Method and composition with **hydroxycitric** acid for **decreasing ghrelin** levels
IN Bagchi, Debasis; Kothari, Shil
PA Interhealth Nutraceuticals, Inc., USA
SO U.S. Pat. Appl. Publ., 8 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004186181	A1	20040923	US 2004-805129	20040319
	WO 2004085462	A2	20041007	WO 2004-US8474	20040319
	WO 2004085462	A3	20051013		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2003-456592P P 20030321

AB A method and composition are disclosed for reducing **ghrelin** levels in a person or other mammal. The method involves administration of a composition incorporating (-)-**hydroxycitric** acid in an amount sufficient to **decrease** the **ghrelin** levels in a person or other mammal. The composition comprises (-)-**hydroxycitric** acid in an amount sufficient to **decrease** the **ghrelin** levels in the person or other mammal. The composition of the method and related composition can also incorporate gymnemic acid, green tea extract, and oxygen coordinated niacin-bound chromium. The method and related composition are effective in reducing **ghrelin** levels in a person or mammal, which decreases feelings of hunger in a person or other mammal and allow for effective **weight** management. Administration of (-)-**hydroxycitric** acid-SX (HCA-SX) from **Garcinia** cambogia and HCA-SX + chromium + gymnemic acid reduced food intake by 11.4 % and 17.2 %, resp., compared to placebo.

IC ICM A61K031-19
INCL 514574000
CC 1-10 (**Pharmacology**)
Section cross-reference(s): **63**
ST hydroxycitrate **decreasing ghrelin** hunger; chromium hydroxycitrate gymnemate redn food intake
IT Gymnema
Gymnema sylvestre
(composition further comprising gymnemic acid from; **hydroxycitric** acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)
IT Gymnemic acids
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(composition further comprising; **hydroxycitric** acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)
IT Tea products
(green, extract of, composition further comprising; **hydroxycitric** acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)
IT Feeding
(**hydroxycitric** acid administration prior to; **hydroxycitric** acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)
IT Body **weight**
Human
Mammalia
(**hydroxycitric** acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)
IT **Garcinia**
Garcinia cambogia

(**hydroxycitric** acid from; **hydroxycitric** acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT Body **weight**
(loss; **hydroxycitric** acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT Food
(reduction of intake of; **hydroxycitric** acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT Alkali metal salts
Alkaline earth salts
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(with **hydroxycitric** acid; **hydroxycitric** acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT 58-08-2, Caffeine, biological studies 989-51-5, Epigallocatechin gallate 3081-61-6, Theanine
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(composition further comprising green tea extract containing; **hydroxycitric** acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT 59-67-6D, Niacin, Chromium complexes 7440-47-3, Chromium, biological studies 7440-47-3D, Chromium, complexes with niacin
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(composition further comprising; **hydroxycitric** acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT 761458-24-6, HCA-SX 762247-04-1
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(food intake reduction with; **hydroxycitric** acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT **304853-26-7**, **Ghrelin**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**hydroxycitric** acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT **7439-93-2D**, Lithium, salts with **hydroxycitric** acid
7439-95-4D, Magnesium, salts with **hydroxycitric** acid
7440-09-7D, Potassium, salts with **hydroxycitric** acid
7440-14-4D, Radium, salts with **hydroxycitric** acid
7440-23-5D, Sodium, salts with **hydroxycitric** acid
7440-24-6D, Strontium, salts with **hydroxycitric** acid
7440-39-3D, Barium, salts with **hydroxycitric** acid
7440-41-7D, Beryllium, salts with **hydroxycitric** acid
7440-46-2D, Cesium, salts with **hydroxycitric** acid
7440-70-2D, Calcium, salts with **hydroxycitric** acid
7440-73-5D, Francium, salts with **hydroxycitric** acid
27750-10-3, (-)-**Hydroxycitric** acid **27750-10-3D**, **Hydroxycitric** acid, group IA metal salts, group IIA metal salts **64913-19-5 132436-67-0 185196-38-7 213385-58-1 449158-84-3 760962-71-8 761426-32-8**, Cesium hydroxycitrate **761426-33-9**, Francium hydroxycitrate **761426-34-0**, Beryllium hydroxycitrate **761426-35-1**, Strontium hydroxycitrate **761426-36-2**, Barium hydroxycitrate **761426-37-3**, Radium hydroxycitrate

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**hydroxycitric** acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT **304853-26-7**, **Ghrelin**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**hydroxycitric** acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

RN 304853-26-7 HCAPLUS
CN Ghrelin (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **7439-93-2D**, Lithium, salts with **hydroxycitric** acid
7439-95-4D, Magnesium, salts with **hydroxycitric** acid
7440-09-7D, Potassium, salts with **hydroxycitric** acid
7440-14-4D, Radium, salts with **hydroxycitric** acid
7440-23-5D, Sodium, salts with **hydroxycitric** acid
7440-24-6D, Strontium, salts with **hydroxycitric** acid
7440-39-3D, Barium, salts with **hydroxycitric** acid
7440-41-7D, Beryllium, salts with **hydroxycitric** acid
7440-46-2D, Cesium, salts with **hydroxycitric** acid
7440-70-2D, Calcium, salts with **hydroxycitric** acid
7440-73-5D, Francium, salts with **hydroxycitric** acid
27750-10-3, (-)-**Hydroxycitric** acid **27750-10-3D**
, **Hydroxycitric** acid, group IA metal salts, group IIA metal salts **64913-19-5 132436-67-0 185196-38-7 213385-58-1 449158-84-3 760962-71-8 76142 6-32-8**, Cesium hydroxycitrate **761426-33-9**, Francium hydroxycitrate **761426-34-0**, Beryllium hydroxycitrate **761426-35-1**, Strontium hydroxycitrate **761426-36-2**, Barium hydroxycitrate **761426-37-3**, Radium hydroxycitrate
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**hydroxycitric** acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

RN 7439-93-2 HCAPLUS
CN Lithium (7CI, 8CI, 9CI) (CA INDEX NAME)

Li

RN 7439-95-4 HCAPLUS
CN Magnesium (8CI, 9CI) (CA INDEX NAME)

Mg

RN 7440-09-7 HCAPLUS
CN Potassium (8CI, 9CI) (CA INDEX NAME)

K

RN 7440-14-4 HCAPLUS
CN Radium (8CI, 9CI) (CA INDEX NAME)

Ra

RN 7440-23-5 HCAPLUS
CN Sodium (8CI, 9CI) (CA INDEX NAME)

Na

RN 7440-24-6 HCAPLUS
CN Strontium (8CI, 9CI) (CA INDEX NAME)

Sr

RN 7440-39-3 HCAPLUS
CN Barium (8CI, 9CI) (CA INDEX NAME)

Ba

RN 7440-41-7 HCAPLUS
CN Beryllium (7CI, 8CI, 9CI) (CA INDEX NAME)

Be

RN 7440-46-2 HCAPLUS
CN Cesium (8CI, 9CI) (CA INDEX NAME)

Cs

RN 7440-70-2 HCAPLUS
CN Calcium (8CI, 9CI) (CA INDEX NAME)

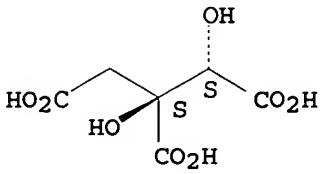
Ca

RN 7440-73-5 HCAPLUS
CN Francium (8CI, 9CI) (CA INDEX NAME)

Fr

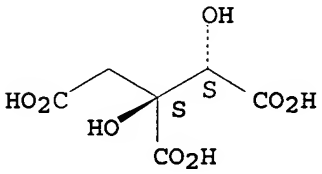
RN 27750-10-3 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



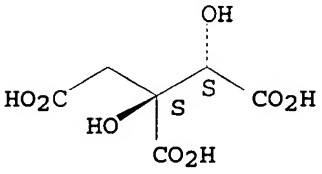
RN 27750-10-3 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy- (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 64913-19-5 HCAPLUS
CN Pentaric acid, 3-C-carboxy-2-deoxy-, sodium salt (9CI) (CA INDEX NAME)

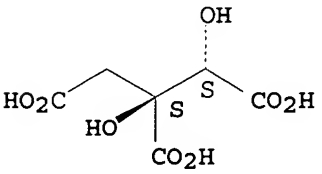
Absolute stereochemistry. Rotation (-).



●x Na

RN 132436-67-0 HCAPLUS
CN D-threo-Pentaric acid, 3-C-carboxy-2-deoxy-, magnesium salt (9CI) (CA INDEX NAME)

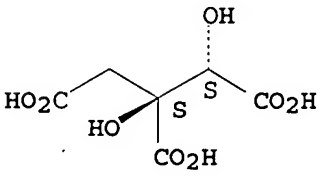
Absolute stereochemistry. Rotation (-).



●x Mg

RN 185196-38-7 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, potassium salt (9CI) (CA INDEX NAME)

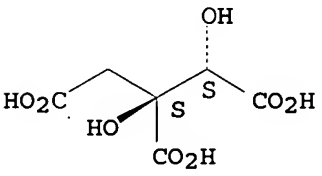
Absolute stereochemistry. Rotation (-).



●x K

RN 213385-58-1 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium salt (9CI) (CA INDEX NAME)

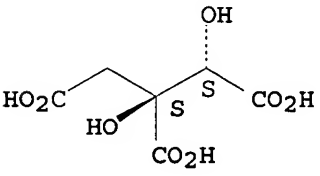
Absolute stereochemistry. Rotation (-).



●x Ca

RN 449158-84-3 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

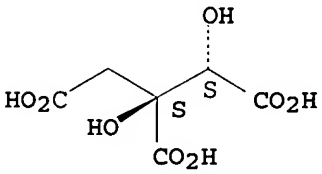


●x Ca

●x K

RN 760962-71-8 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, lithium salt (9CI) (CA INDEX NAME)

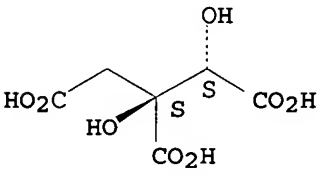
Absolute stereochemistry. Rotation (-).



●x Li

RN 761426-32-8 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, monocesium salt (9CI) (CA INDEX NAME)

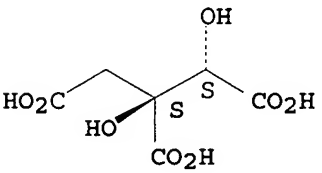
Absolute stereochemistry. Rotation (-).



● Cs

RN 761426-33-9 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, monofrancium salt (9CI) (CA INDEX NAME)

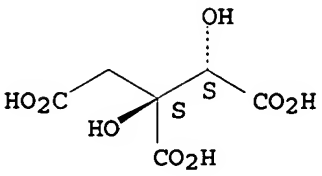
Absolute stereochemistry. Rotation (-).



● Fr

RN 761426-34-0 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, beryllium salt (2:1) (9CI) (CA INDEX NAME)

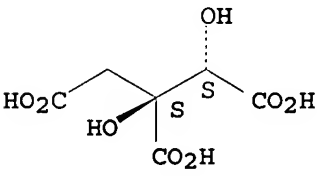
Absolute stereochemistry. Rotation (-).



●1/2 Be

RN 761426-35-1 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, strontium salt (2:1) (9CI) (CA INDEX NAME)

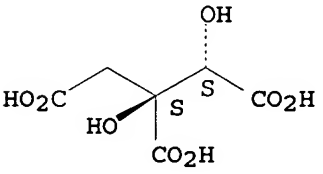
Absolute stereochemistry. Rotation (-).



●1/2 Sr

RN 761426-36-2 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, barium salt (2:1) (9CI) (CA INDEX NAME)

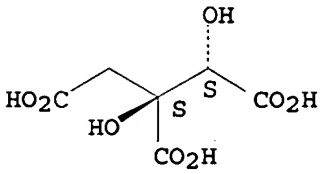
Absolute stereochemistry. Rotation (-).



●1/2 Ba

RN 761426-37-3 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, radium salt (2:1) (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●1/2 Ra

L26 ANSWER 9 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:439406 HCAPLUS
DN 142:68955
TI Effects of a natural extract of (-)-hydroxycitric acid (HCA-SX) and a combination of HCA-SX plus niacin-bound chromium and Gymnema sylvestre extract on **weight** loss
AU Preuss, H. G.; Bagchi, D.; Bagchi, M.; Rao, C. V. S.; Dey, D. K.; Satyanarayana, S.
CS Department of Physiology and Biophysics, Georgetown University Medical Center, Washington, DC, USA
SO Diabetes, Obesity and Metabolism (2004), 6(3), 171-180
CODEN: DOMEF6; ISSN: 1462-8902
PB Blackwell Publishing Ltd.
DT Journal
LA English
AB Aim: The efficacy of optimal doses of highly bioavailable (-)-hydroxycitric acid (HCA-SX) alone and in combination with niacin-bound chromium (NBC) and a standardized Gymnema sylvestre extract (GSE) on **weight** loss in moderately obese subjects was evaluated by monitoring changes in body **weight**, body mass index (BMI), appetite, lipid profiles, serum leptin and excretion of urinary fat metabolites. HCA-SX has been shown to reduce appetite, inhibit fat synthesis and decrease body **weight** without stimulating the central nervous system. NBC has demonstrated its ability to maintain healthy insulin levels, while GSE has been shown to regulate **weight** loss and blood sugar levels. Methods: A randomized, double-blind, placebo-controlled human study was conducted in Elluru, India for 8 wk in 60 moderately obese subjects (ages 21-50, BMI > 26 kg/m2). Subjects were randomly divided into three groups. Group A was administered HCA-SX 4667 mg, group B was administered a combination of HCA-SX 4667 mg, NBC 4 mg and GSE 400 mg, while group C was given placebo daily in three equally divided doses 30-60 min before meals. All subjects received a 2000 kcal diet/day and participated in supervised walking. Results: At the end of 8 wk, body **weight** and BMI decreased by 5-6% in both groups A and B. Food intake, total cholesterol, low-d. lipoproteins, triglycerides and serum leptin levels were significantly reduced in both groups, while high-d. lipoprotein levels and excretion of urinary fat metabolites increased in both groups. A marginal or non-significant effect was observed in all parameters in group C. Conclusion: The present study shows that optimal doses of HCA-SX and, to a greater degree, the combination of HCA-SX, NBC and GSE can serve as an effective and safe **weight**-loss formula that can facilitate a reduction in excess body **weight** and BMI, while promoting healthy blood lipid levels.
CC 1-11 (**Pharmacology**)
ST hydroxycitric acid niacin bound chromium Gymnema sylvestre **wt** loss

IT Combination chemotherapy
(HCA-SX alone or with NBC, GSE combination reduced body **weight**, BMI, appetite, LDL, total cholesterol, triglyceride, serum leptin level raised HDL, urinary fat metabolite excretion and combination gave better result than alone in obese human)

IT Lipoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HCA-SX alone or with NBC, GSE combination reduced body **weight**, BMI, appetite, LDL, total cholesterol, triglyceride, serum leptin level raised HDL, urinary fat metabolite excretion and combination gave better result than alone in obese human)

IT Human
(HCA-SX alone or with NBC, GSE combination reduced body **weight**, BMI, appetite, LDL, total cholesterol, triglyceride, serum leptin level raised HDL, urinary fat metabolite excretion and combination gave better result than given alone in human)

IT Antiobesity agents
(HCA-SX alone or with NBC, GSE combination reduced body **weight**, LDL, total cholesterol, triglyceride, serum leptin level raised HDL, urinary fat metabolite excretion and combination gave better result than given alone in obese human)

IT Gymnema sylvestre
(effects of a natural extract of (-)-hydroxycitric acid (HCA-SX) and a combination of HCA-SX plus niacin-bound chromium and Gymnema sylvestre extract on **weight** loss)

IT Glycerides, biological studies
High-density lipoproteins
Low-density lipoproteins
Very-low-density lipoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(food intake, total cholesterol, low-d. lipoproteins, triglycerides and serum leptin levels were significantly reduced in both groups, while high-d. lipoprotein levels and excretion of urinary fat metabolites increased in both groups)

IT Body **weight**
(loss; effects of a natural extract of (-)-hydroxycitric acid (HCA-SX) and a combination of HCA-SX plus niacin-bound chromium and Gymnema sylvestre extract on **weight** loss)

IT 9027-95-6, ATP citrate lyase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ATP citrate lyase inhibitor HCA-SX alone or in combination with NBC and GSE was effective and safe showing reduced excess body **wt** . and BMI and promoted blood lipid levels in human)

IT 169494-85-3, Leptin
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HCA-SX alone or with NBC, GSE combination reduced body **weight**, BMI, appetite, LDL, total cholesterol, triglyceride, serum leptin level raised HDL, urinary fat metabolite excretion and combination gave better result than alone in obese human)

IT 156680-49-8, Chromemate **449158-84-3**, Super CitriMax
812674-38-7, GYM 250
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(HCA-SX alone or with NBC, GSE combination reduced body **weight**, BMI, appetite, LDL, total cholesterol, triglyceride, serum leptin level raised HDL, urinary fat metabolite excretion and combination gave better result than given alone in human)

IT 57-88-5, Cholesterol, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(food intake, total cholesterol, low-d. lipoproteins, triglycerides and

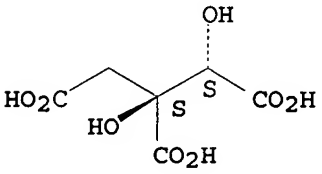
serum leptin levels were significantly reduced in both groups, while high-d. lipoprotein levels and excretion of urinary fat metabolites increased in both groups)

IT **449158-84-3**, Super CitriMax
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(HCA-SX alone or with NBC, GSE combination reduced body **weight**, BMI, appetite, LDL, total cholesterol, triglyceride, serum leptin level raised HDL, urinary fat metabolite excretion and combination gave better result than given alone in human)

RN 449158-84-3 HCAPLUS

CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x Ca

●x K

RE.CNT 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 10 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:430456 HCAPLUS
DN 140:412347
TI Method for stable and controlled delivery of (-)-hydroxycitric acid salts
IN Clouatre, Dallas L.; Clouatre, Daniel E.; Dunn, James M.
PA USA
SO U.S. Pat. Appl. Publ., 7 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004101555	A1	20040527	US 2002-303117	20021123
PRAI US 2002-303117		20021123		

AB Disclosed is a method for making the potassium, sodium and other hygroscopic salts of (-)-hydroxycitric acid and mixts. thereof workable by initial treatment with a desiccating agent, such as fumed silicon dioxide. These may be further rendered non-hygroscopic and non-reactive in acidic media via subsequent encasement in hydrophobic and acidophobic polymers. The calcium and magnesium salts of (-)-hydroxycitric acid likewise can be rendered nonreactive in acidic media. The resulting products are suitable for tableting, encapsulation and use in other dry media for **weight** loss, appetite suppression, improvements in fat metabolism and postprandial

lipemia and other pharmaceutical purposes. Further, the products of this invention can be made nonreactive as components of acidic liquid drink mixes and snack bars and can be used in the production of controlled release administration formats.

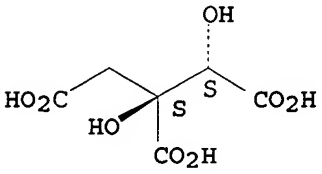
IC ICM A61K031-724
ICS A61K009-20; A61K009-16; A61K009-50
INCL 424465000; 514058000; 424439000
CC 63-6 (**Pharmaceuticals**)
Section cross-reference(s): 17
ST hydroxycitrate desiccant polymer stabilizer fat metab improvement; silica polymer hydroxycitrate stability oral delivery health food
IT Lipids, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(blood, lowering by; oral delivery of stabilized (-)-hydroxycitric acid salts for improving metabolic functions)
IT Drug delivery systems
(capsules; oral delivery of stabilized (-)-hydroxycitric acid salts for improving metabolic functions)
IT Body **weight**
(loss; oral delivery of stabilized (-)-hydroxycitric acid salts for improving metabolic functions)
IT Adipose tissue
(metabolism enhancement by; oral delivery of stabilized (-)-hydroxycitric acid salts for improving metabolic functions)
IT Appetite depressants
Beverages
(oral delivery of stabilized (-)-hydroxycitric acid salts for improving metabolic functions)
IT Hyperlipidemia
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(postprandial, inhibition by; oral delivery of stabilized (-)-hydroxycitric acid salts for improving metabolic functions)
IT Drying agents
(processing (-)-hydroxycitric acid salts using desiccants and polymers for stabilization and oral delivery for improving metabolic functions)
IT Polyesters, biological studies
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(processing (-)-hydroxycitric acid salts using desiccants and polymers for stabilization and oral delivery for improving metabolic functions)
IT Food
(snack, bars; oral delivery of stabilized (-)-hydroxycitric acid salts for improving metabolic functions)
IT Drug delivery systems
(tablets; oral delivery of stabilized (-)-hydroxycitric acid salts for improving metabolic functions)
IT 9012-83-3, Citrate lyase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(cytoplasmic, inhibition by; processing (-)-hydroxycitric acid salts using desiccants and polymers for stabilization and oral delivery for improving metabolic functions)
IT 79-10-7D, Acrylic acid, derivs., polymers 7631-86-9, Silicon dioxide, biological studies 9004-38-0, Cellulose acetate phthalate 9004-57-3, Ethyl cellulose 12619-70-4, Cyclodextrin 12619-70-4D, Cyclodextrin, hydroxypropyl ethers 26009-03-0, Polyglycolic acid 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Polylactic acid 26124-68-5, Polyglycolic acid 52907-01-4, Cellulose acetate trimellitate 53237-50-6 **64913-19-5** 98723-86-5, Hydroxymethyl cellulose phthalate **132436-67-0 185196-38-7 213385-58-1**
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study)

; USES (Uses)
(processing (-)-hydroxycitric acid salts using desiccants and polymers for stabilization and oral delivery for improving metabolic functions)

IT **64913-19-5 132436-67-0 185196-38-7 213385-58-1**
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(processing (-)-hydroxycitric acid salts using desiccants and polymers for stabilization and oral delivery for improving metabolic functions)

RN 64913-19-5 HCAPLUS
CN Pentaric acid, 3-C-carboxy-2-deoxy-, sodium salt (9CI) (CA INDEX NAME)

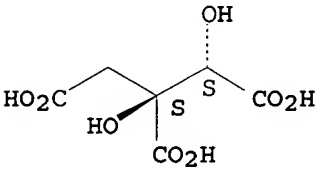
Absolute stereochemistry. Rotation (-).



●x Na

RN 132436-67-0 HCAPLUS
CN D-threo-Pentaric acid, 3-C-carboxy-2-deoxy-, magnesium salt (9CI) (CA INDEX NAME)

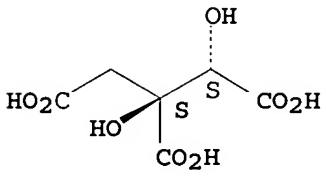
Absolute stereochemistry. Rotation (-).



●x Mg

RN 185196-38-7 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, potassium salt (9CI) (CA INDEX NAME)

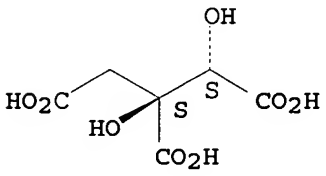
Absolute stereochemistry. Rotation (-).



●x K

RN 213385-58-1 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x Ca

L26 ANSWER 11 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:350574 HCAPLUS
DN 141:17433
TI Physico-chemical properties of a novel (-)-hydroxycitric acid extract and its effect on body **weight**, selected organ **weights**, hepatic lipid peroxidation and DNA fragmentation, hematology and clinical chemistry, and histopathological changes over a period of 90 days
AU Shara, Michael; Ohia, Sunny E.; Schmidt, Robert E.; Yasmin, Taharat; Zardetta-Smith, Andrea; Kincaid, Anthony; Bagchi, Manashi; Chatterjee, Archana; Bagchi, Debasis; Stohs, Sidney J.
CS School of Pharmacy and Health Professions, Department of Pharmacy Sciences, Creighton University Medical Center, Omaha, NE, USA
SO Molecular and Cellular Biochemistry (2004), 260(1&2), 171-186
CODEN: MCBIB8; ISSN: 0300-8177
PB Kluwer Academic Publishers
DT Journal
LA English
AB Garcinia cambogia-derived (-)-hydroxycitric acid (HCA) is a popular and natural supplement for **weight** management. HCA is a competitive inhibitor of the enzyme ATP citrate lyase, which catalyzes the conversion of citrate and CoA to oxaloacetate and acetyl CoA (acetyl CoA) in the cytosol. Acetyl CoA is used in the synthesis of fatty acids, cholesterol and triglycerides, and in the synthesis of acetylcholine in the central nervous system. Studies have demonstrated the efficacy of a novel 60% calcium-potassium salt of HCA derived from Garcinia cambogia (HCA-SX, Super CitriMax) in **weight** management. Results have shown that HCA-SX promotes fat oxidation, enhances serotonin release and availability in the brain cortex, normalizes lipid profiles, and lowers serum leptin

levels in obese subjects. Acute oral, acute dermal, primary dermal irritation and primary eye irritation toxicity, as well as Ames bacterial reverse mutation studies and mouse lymphoma tests have demonstrated the safety of HCA-SX. However, no detailed long-term safety of HCA-SX or any other HCA extract has been previously assessed. We evaluated the dose- and time-dependent effects of HCA-SX in Sprague-Dawley rats on body **wt**., selected organ wts., hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin. chemical over a period of 90 days. Furthermore, a 90-day histopathol. evaluation was conducted. The animals were treated with 0, 0.2, 2.0 and 5.0% HCA-SX of feed intake and were sacrificed on 30, 60 or 90 days of treatment. The body **weight** and selected organ wts. were assessed and correlated as a % of body **weight** and brain **wt**. at 90 days of treatment. A significant reduction in body **weight** was observed in treated rats as compared to control animals. An advancing age-induced marginal increase in hepatic lipid peroxidn. was observed in both male and female rats, while no such difference in hepatic DNA fragmentation was observed as compared to the control animals. Furthermore, selected organ wts. individually and as a % of body **weight** and brain **weight** at 90 days of treatment exhibited no significant difference between the groups. No difference was observed in hematol. and clin. chemical or the histopathol. evaluation. Taken together, these results show that 90 day treatment of HCA-SX results in a reduction in body **wt**., and does not cause any changes in major organs or in hematol., clin. chemical, and histopathol.

CC 1-11 (**Pharmacology**)

ST hydroxycitrate body **wt** liver lipid peroxidn DNA fragmentation hematol; Super CitriMax antiobesity obese liver lipid peroxidn organ **wt**

IT Antiobesity agents
Body **weight**
Garcinia cambogia
Lipid peroxidation
Obesity
(effect (-)-hydroxycitric acid extract on body **weight**, selected organ wts., hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin. chemical, and histopathol. changes over a period of 90 days)

IT DNA fragmentation
Lipid peroxidation
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(effect (-)-hydroxycitric acid extract on body **weight**, selected organ wts., hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin. chemical, and histopathol. changes over a period of 90 days)

IT Natural products, pharmaceutical
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(effect (-)-hydroxycitric acid extract on body **weight**, selected organ wts., hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin. chemical, and histopathol. changes over a period of 90 days)

IT Adrenal gland
Brain
Heart
Kidney
Liver
Ovary
Prostate gland
Seminal vesicle
Spleen
Thymus gland
Uterus
(**weight**; effect (-)-hydroxycitric acid extract on body **wt**

., selected organ wts., hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin. chemical, and histopathol. changes over a period of 90 days)

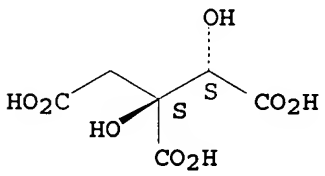
IT **449158-84-3**, Super CitriMax
RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(effect (-)-hydroxycitric acid extract on body **weight**, selected organ wts., hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin. chemical, and histopathol. changes over a period of 90 days)

IT **449158-84-3**, Super CitriMax
RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(effect (-)-hydroxycitric acid extract on body **weight**, selected organ wts., hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin. chemical, and histopathol. changes over a period of 90 days)

RN 449158-84-3 HCAPLUS

CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x Ca

●x K

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 12 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:871815 HCAPLUS

DN 140:264420

TI Dose- and time-dependent effects of a novel (-)-hydroxycitric acid extract on body **weight**, hepatic and testicular lipid peroxidation, DNA fragmentation and histopathological data over a period of 90 days

AU Shara, Michael; Ohia, Sunney E.; Yasmin, Taharat; Zardetto-Smith, Andrea; Kincaid, Anthony; Bagchi, Manashi; Chatterjee, Archana; Bagchi, Debasis; Stohs, Sidney J.

CS School of Pharmacy and Health Professions, Department of Pharmacy Sciences, Creighton University Medical Center, Omaha, NE, 68178, USA

SO Molecular and Cellular Biochemistry (2003), 254(1&2), 339-346
CODEN: MCBIB8; ISSN: 0300-8177

PB Kluwer Academic Publishers

DT Journal

LA English

AB (-)-Hydroxycitric acid (HCA), a natural extract from the dried fruit rind of Garcinia cambogia (family Guttiferae), is a popular supplement for **weight** management. The dried fruit rind has been used for centuries

as a condiment in Southeastern Asia to make food more filling and satisfying. A significant number of studies highlight the efficacy of Super CitriMax (HCA-SX, a novel 60% calcium-potassium salt of HCA derived from Garcinia cambogia) in **weight** management. These studies also demonstrate that HCA-SX promotes fat oxidation, inhibits ATP-citrate lyase (a building block for fat synthesis), and lowers the level of leptin in obese subjects. Acute oral, acute dermal, primary dermal irritation and primary eye irritation toxicity studies have demonstrated the safety of HCA-SX. However, no long-term safety of HCA-SX or any other (-)-hydroxycitric acid extract has been previously assessed. In this study, we have evaluated the dose- and time-dependent effects of HCA-SX in Sprague-Dawley rats on body **weight**, hepatic and testicular lipid peroxidn., DNA fragmentation, liver and testis **weight**, expressed as such and as a % of body **weight** and brain **weight**, and histopathol. changes over a period of 90 days. The animals were treated with 0, 0.2, 2.0 and 5.0% HCA-SX as feed intake and the animals were sacrificed on 30, 60 or 90 days of treatment. The feed and water intake were assessed and correlated with the reduction in body **weight** HCA-SX supplementation demonstrated a reduction in body **weight** in both male and female rats over a period of 90 days as compared to the corresponding control animals. An advancing age-induced marginal increase in hepatic lipid peroxidn. was observed in both male and female rats as compared to the corresponding control animals. However, no such difference in hepatic DNA fragmentation and testicular lipid peroxidn. and DNA fragmentation was observed Furthermore, liver and testis **weight**, expressed as such and as a percentage of body **weight** and brain **weight**, at 30, 60 and 90 days of treatment, exhibited no significant difference between the four groups. Taken together, these results indicate that treatment of HCA-SX over a period of 90 days results in a reduction in body **weight**, but did not cause any changes in hepatic and testicular lipid peroxidn., DNA fragmentation, or histopathol. changes.

CC 1-12 (**Pharmacology**)
Section cross-reference(s): 11

ST hydroxycitrate **wt** management liver testis lipid peroxidn DNA fragmentation

IT Behavior
(drinking; effects of hydroxycitric acid extract on body **weight**, hepatic and testicular lipid peroxidn., DNA fragmentation and histopathol.)

IT Apoptosis
Body **weight**
Feeding
Lipid peroxidation
Liver
Testis
(effects of hydroxycitric acid extract on body **weight**, hepatic and testicular lipid peroxidn., DNA fragmentation and histopathol.)

IT DNA fragmentation
Lipid peroxidation
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(effects of hydroxycitric acid extract on body **weight**, hepatic and testicular lipid peroxidn., DNA fragmentation and histopathol.)

IT Natural products, pharmaceutical
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(effects of hydroxycitric acid extract on body **weight**, hepatic and testicular lipid peroxidn., DNA fragmentation and histopathol.)

IT 27750-10-3, (-)-Hydroxycitric acid **449158-84-3**, Super CitriMax
RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)

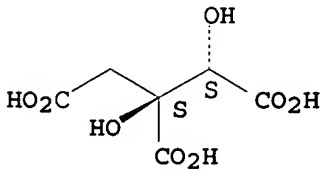
(effects of hydroxycitric acid extract on body **weight**, hepatic and testicular lipid peroxidn., DNA fragmentation and histopathol.)

IT **449158-84-3**, Super CitriMax
RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(effects of hydroxycitric acid extract on body **weight**, hepatic and testicular lipid peroxidn., DNA fragmentation and histopathol.)

RN 449158-84-3 HCAPLUS

CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x Ca

●x K

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 13 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:688478 HCAPLUS
DN 137:222054
TI Salts of (-)-hydroxycitric acid for pharmaceutical preparations for stable and controlled delivery
IN Clouatre, Dallas L.; Dunn, James M.
PA USA
SO U.S., 6 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 6447807	B1	20020910	US 2000-661665	20000914
PRAI US 1999-153920P	P	19990914		
US 1999-153923P	P	19990914		
US 1999-153924P	P	19990914		

AB A method for making the potassium and sodium salts of (-)-hydroxycitric acid and mixts. thereof workable, non-hygroscopic and non-reactive in acidic media by encasement in hydrophobic and acidophobic polymers are described. The calcium and magnesium salts of (-)-hydroxycitric acid likewise can be rendered non-reactive in acidic media. The resulting products are suitable for tableting, encapsulation and use in other dry media for **weight** loss, appetite suppression, improvements in fat metabolism and postprandial lipemia and other pharmaceutical purposes. Further, the products of this invention can be made non-reactive as

components of acidic liquid drink mixes and snack bars and can be used in the production of controlled release administration formats. For example, a powder containing potassium (-)-hydroxycitrate powder (35% KHCA) 1.00 g, cellulose acetate phthalate 0.50 g, calcium sulfate 0.30 g, talc 0.03 g, and magnesium stearate 0.02 g can be used to compress tablets weighing 1000-1500 mg which would contain 540-818 mg of the prepared KHCA powder. Considering that the starting material is only 35% active, the amount of KHCA per tablet would be 189-287 mg. These tablets will not dissolve in the acid media of the stomach and will start a gradually release of the drug product once they arrive in the more pH neutral media of the 2nd part of the small intestine. Addnl. these tablets can be over coated with a clear film to protect them from any random damage, but this will not affect their dissoln. rate.

IC ICM A61K009-16
ICS A61K009-50; A61K047-00; A61K009-22; A61K009-00
INCL 424494000
CC 63-6 (**Pharmaceuticals**)
Section cross-reference(s): **1**, 17
ST hydroxycitrate polymer coating encapsulation granule stability; controlled release delivery system hydroxycitrate polymer
IT Confectionery
(bars; polymer coating or encapsulation of (-)-hydroxycitrate salts for stable and controlled delivery systems)
IT Drug delivery systems
(capsules; polymer coating or encapsulation of (-)-hydroxycitrate salts for stable and controlled delivery systems)
IT Drug delivery systems
(controlled-release; polymer coating or encapsulation of (-)-hydroxycitrate salts for stable and controlled delivery systems)
IT Drying
(fluidized-bed; polymer coating or encapsulation of (-)-hydroxycitrate salts for stable and controlled delivery systems)
IT Polyesters, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lactic acid-based; polymer coating or encapsulation of (-)-hydroxycitrate salts for stable and controlled delivery systems)
IT Antiobesity agents
Appetite depressants
Beverages
Freeze drying
Granulation
Human
Hypolipemic agents
(polymer coating or encapsulation of (-)-hydroxycitrate salts for stable and controlled delivery systems)
IT Acrylic polymers, biological studies
Polyesters, biological studies
Zeins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polymer coating or encapsulation of (-)-hydroxycitrate salts for stable and controlled delivery systems)
IT Hyperlipidemia
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(postprandial, reduction of; polymer coating or encapsulation of (-)-hydroxycitrate salts for stable and controlled delivery systems)
IT Drying
(spray; polymer coating or encapsulation of (-)-hydroxycitrate salts for stable and controlled delivery systems)
IT Drug delivery systems
(tablets; polymer coating or encapsulation of (-)-hydroxycitrate salts

for stable and controlled delivery systems)

IT 9012-83-3, Citrate lyase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibition of cytoplasmic; polymer coating or encapsulation of (-)-hydroxycitrate salts for stable and controlled delivery systems)

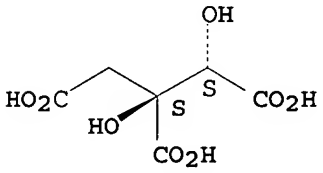
IT 27750-10-3D, (-)-Hydroxycitric acid, salts **64913-19-5** **185196-38-7**
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polymer coating or encapsulation of (-)-hydroxycitrate salts for stable and controlled delivery systems)

IT 57-55-6D, 1,2-Propanediol, ethers with cyclodextrin 69-65-8, D-Mannitol 9004-38-0, Cellulose acetate phthalate 9004-57-3, Ethyl cellulose 9050-31-1 9062-10-6 12619-70-4D, Cyclodextrin, ethers with propanediol 26009-03-0, Poly(glycolic acid) 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Poly(lactic acid) 26124-68-5, Poly(glycolic acid) 53237-50-6
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polymer coating or encapsulation of (-)-hydroxycitrate salts for stable and controlled delivery systems)

IT **64913-19-5** **185196-38-7**
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polymer coating or encapsulation of (-)-hydroxycitrate salts for stable and controlled delivery systems)

RN 64913-19-5 HCAPLUS
CN Pentaric acid, 3-C-carboxy-2-deoxy-, sodium salt (9CI) (CA INDEX NAME)

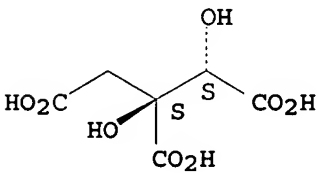
Absolute stereochemistry. Rotation (-).



●x Na

RN 185196-38-7 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, potassium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x K

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 14 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:190874 HCAPLUS
DN 132:227426
TI Hydroxycitric acid compositions for lipogenesis inhibitors and appetite suppressants
IN Gokaraju, Ganga Raju
PA Interhealth Nutraceuticals, Inc., USA
SO PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

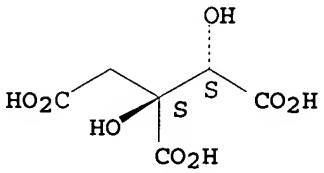
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000015051	A1	20000323	WO 1999-US21099	19990914
W: CA, IN, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
PRAI US 1998-151806	A	19980914		

AB Partial calcium salts of hydroxycitric acid are prepared as lipogenesis inhibitors and appetite suppressants; the preparation is potassium-free and obtained from an extract of Garcinia fruit. The composition is highly water soluble, has minimal hygroscopicity, and has favorable flavor and aesthetic properties. Thus, hydroxycitric acid is obtained from Garcinia rind by alc./acetone extraction, and after clean up and concentration calcium hydroxycitrate is formed by adding calcium hydroxide; conversion to the partial calcium salt of hydroxycitric acid is achieved by using sulfuric acid.

IC ICM A23L001-30
ICS A61K031-194; A61K031-365; A23L001-03
CC 63-4 (**Pharmaceuticals**)
Section cross-reference(s): **1**, 17
ST Garcinia hydroxycitrate calcium lipogenesis inhibitor appetite suppressant; citrate hydroxy lipogenesis inhibitor appetite suppressant
IT Antiobesity agents
Appetite depressants
Flavor
Food additives
Garcinia
(hydroxycitric acid compns. for lipogenesis inhibitors and appetite suppressants)
IT Lipids, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(lipogenesis inhibitors; hydroxycitric acid compns. for lipogenesis inhibitors and appetite suppressants)
IT Body **weight**
(loss; hydroxycitric acid compns. for lipogenesis inhibitors and appetite suppressants)
IT 27750-10-3P, Hydroxycitric acid **213385-58-1P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); FFD (Food or feed use); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(hydroxycitric acid compns. for lipogenesis inhibitors and appetite suppressants)
IT 7440-09-7, Potassium, biological studies 7440-23-5, Sodium, biological

studies 7440-70-2, Calcium, biological studies
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(hydroxycitric acid compns. for lipogenesis inhibitors and appetite suppressants)
IT **213385-58-1P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); FFD (Food or feed use); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(hydroxycitric acid compns. for lipogenesis inhibitors and appetite suppressants)
RN 213385-58-1 HCAPLUS
CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x Ca

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 15 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:81564 HCAPLUS
DN 130:144169
TI Hydroxycitric acid compositions, pharmaceutical and dietary supplements and food products made therefrom, and methods for their use in reducing body **weight**
IN Raju, G. Ganga
PA Interhealth Nutraceuticals Incorporated, USA
SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9903464	A1	19990128	WO 1998-US14481	19980713
	W: JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1011660	A1	20000628	EP 1998-935633	19980713
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2001527022	T2	20011225	JP 2000-502764	19980713
	US 2005282894	A1	20051222	US 2005-209429	20050822
	US 2005282904	A1	20051222	US 2005-209580	20050822
PRAI	US 1997-892414	A	19970714		
	WO 1998-US14481	W	19980713		

US 2002-463024 A1 20020215

AB Hydroxycitric acid (I) compns. which comprise approx. 14 to 26 % by **weight** of calcium, and approx. 24 to 40 % by **weight** of potassium or approx. 14 to 24 % by **weight** of sodium, or a mixture thereof, each calculated as a percentage of the total hydroxycitric acid content of the composition, together with dietary supplements and food products containing such compns. and methods for utilizing such compns., dietary supplements and food products to reduce body **weight** in mammals are disclosed. Exts. from Garcinia fruits reacted with calcium hydroxide to obtain calcium hydroxycitrate which was reacted with phosphoric acid to convert the calcium hydroxycitrate to I (yield 91.6%). I was reacted with calcium hydroxide to obtain calcium salt of I.

IC ICM A61K031-34
ICS A61K031-19

CC 63-4 (**Pharmaceuticals**)
Section cross-reference(s): **1**

ST pharmaceutical food hydroxycitric acid body **wt**; diet supplement hydroxycitric acid body **wt**

IT Garcinia
(fruits exts.; pharmaceutical and dietary supplements and food products containing hydroxycitric acid for reducing body **weight**)

IT Antiobesity agents
Body **weight**
Food
(pharmaceutical and dietary supplements and food products containing hydroxycitric acid for reducing body **weight**)

IT Diet
(supplements; pharmaceutical and dietary supplements and food products containing hydroxycitric acid for reducing body **weight**)

IT 27750-10-3, Hydroxycitric acid
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(pharmaceutical and dietary supplements and food products containing hydroxycitric acid for reducing body **weight**)

IT 1305-62-0, Calcium hydroxide, reactions 7664-38-2, Phosphoric acid, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(pharmaceutical and dietary supplements and food products containing hydroxycitric acid for reducing body **weight**)

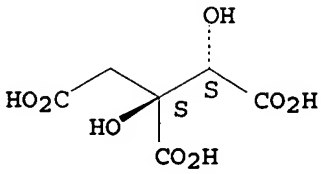
IT **213385-58-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(pharmaceutical and dietary supplements and food products containing hydroxycitric acid for reducing body **weight**)

IT **213385-58-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(pharmaceutical and dietary supplements and food products containing hydroxycitric acid for reducing body **weight**)

RN 213385-58-1 HCAPLUS

CN D-erythro-Pentaric acid, 3-C-carboxy-2-deoxy-, calcium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



●x Ca

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

Authors

=> FILE HCAPLU
FILE 'HCAPLUS' ENTERED AT 17:00:38 ON 31 AUG 2006
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FILE COVERS 1907 - 31 Aug 2006 VOL 145 ISS 10
FILE LAST UPDATED: 30 Aug 2006 (20060830/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE L31
L2 32 SEA FILE=REGISTRY ABB=ON (27750-10-3/BI OR 7440-47-3/BI OR 132436-67-0/BI OR 185196-38-7/BI OR 213385-58-1/BI OR 304853-26-7/BI OR 3081-61-6/BI OR 449158-84-3/BI OR 58-08-2/BI OR 59-67-6/BI OR 64913-19-5/BI OR 7439-93-2/BI OR 7439-95-4/BI OR 7440-09-7/BI OR 7440-14-4/BI OR 7440-23-5/BI OR 7440-24-6/BI OR 7440-39-3/BI OR 7440-41-7/BI OR 7440-46-2/BI OR 7440-70-2/BI OR 7440-73-5/BI OR 760962-71-8/BI OR 761426-32-8/BI OR 761426-33-9/BI OR 761426-34-0/BI OR 761426-35-1/BI OR 761426-36-2/BI OR 761426-37-3/BI OR 761458-24-6/BI OR 762247-04-1/BI OR 989-51-5/BI)
L3 12 SEA FILE=REGISTRY ABB=ON L2 AND SALT
L4 1 SEA FILE=REGISTRY ABB=ON L2 AND GHRELIN
L5 1 SEA FILE=REGISTRY ABB=ON 27750-10-3
L9 1957 SEA FILE=HCAPLUS ABB=ON L4 OR GHRELIN
L16 352 SEA FILE=HCAPLUS ABB=ON L9(3A)(DECREAS? OR LOW?)
L17 237 SEA FILE=HCAPLUS ABB=ON L5
L27 169 SEA FILE=HCAPLUS ABB=ON "BAGCHI DEBASIS"/AU

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L28            8 SEA FILE=HCAPLUS ABB=ON  KOTHARI SHIL?/AU
L29            4 SEA FILE=HCAPLUS ABB=ON  L27 AND L28
L30           15 SEA FILE=HCAPLUS ABB=ON  (L27 OR L28) AND (L9 OR L16 OR L17 OR
                 L3)
L31           17 SEA FILE=HCAPLUS ABB=ON  L29 OR L30


=> FILE MEDLINE
FILE 'MEDLINE' ENTERED AT 17:00:51 ON 31 AUG 2006

 FILE LAST UPDATED: 30 Aug 2006 (20060830/UP). FILE COVERS 1950 TO DATE.

 On December 11, 2005, the 2006 MeSH terms were loaded.

 The MEDLINE reload for 2006 is now (26 Feb.) available. For details
 on the 2006 reload, enter HELP RLOAD at an arrow prompt (=>).
 See also:

    http://www.nlm.nih.gov/mesh/
    http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
    http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html
    http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

 OLDMEDLINE is covered back to 1950.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2006 vocabulary.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> D QUE L38
L2            32 SEA FILE=REGISTRY ABB=ON  (27750-10-3/BI OR 7440-47-3/BI OR
                 132436-67-0/BI OR 185196-38-7/BI OR 213385-58-1/BI OR 304853-26
                 -7/BI OR 3081-61-6/BI OR 449158-84-3/BI OR 58-08-2/BI OR
                 59-67-6/BI OR 64913-19-5/BI OR 7439-93-2/BI OR 7439-95-4/BI OR
                 7440-09-7/BI OR 7440-14-4/BI OR 7440-23-5/BI OR 7440-24-6/BI
                 OR 7440-39-3/BI OR 7440-41-7/BI OR 7440-46-2/BI OR 7440-70-2/BI
                  OR 7440-73-5/BI OR 760962-71-8/BI OR 761426-32-8/BI OR
                 761426-33-9/BI OR 761426-34-0/BI OR 761426-35-1/BI OR 761426-36
                 -2/BI OR 761426-37-3/BI OR 761458-24-6/BI OR 762247-04-1/BI OR
                 989-51-5/BI)
L4             1 SEA FILE=REGISTRY ABB=ON  L2 AND GHRELIN
L5             1 SEA FILE=REGISTRY ABB=ON  27750-10-3
L32         1733 SEA FILE=MEDLINE ABB=ON  L4 OR GHRELIN
L33          116 SEA FILE=MEDLINE ABB=ON  L5 OR HYDROXYCITRIC?
L35          455 SEA FILE=MEDLINE ABB=ON  BAGCHI D?/AU OR KOTHARI S?/AU
L36           50 SEA FILE=MEDLINE ABB=ON  L35 AND (L32 OR L33 OR WEIGHT? OR
                 GARCINIA?)
L37        15583 SEA FILE=MEDLINE ABB=ON  CITRATES+NT/CT
L38           11 SEA FILE=MEDLINE ABB=ON  L36 AND L37

=> DUP REM L31 L38
FILE 'HCAPLUS' ENTERED AT 17:01:07 ON 31 AUG 2006
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FILE 'MEDLINE' ENTERED AT 17:01:07 ON 31 AUG 2006
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PROCESSING COMPLETED FOR L31
PROCESSING COMPLETED FOR L38
L42 21 DUP REM L31 L38 (7 DUPLICATES REMOVED)

=> D L42 1-21 ALL

L42 ANSWER 1 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:469866 HCAPLUS
DN 144:460642
ED Entered STN: 19 May 2006
TI DNA microarray technology in the evaluation of weight management potential of a novel calcium-potassium salt of (-)-hydroxycitric acid. [Erratum to document cited in CA144:381745]
AU Bagchi, Manashi; Zafra-Stone, Shirley; Sen, Chandan K.; Roy, Sashwati; **Bagchi, Debasis**
CS InterHealth Research Center, Benicia, CA, USA
SO Toxicology Mechanisms and Methods (2006), 16(4), 241
CODEN: TMMOCP; ISSN: 1537-6524
PB Taylor & Francis, Inc.
DT Journal
LA English
CC 1-10 (Pharmacology)
Section cross-reference(s): 17
AB This article did not print with color figures. A correct version of this article is available in the official online version of the issue.
ST erratum DNA microarray calcium potassium hydroxycitrate antiobesity serotonin receptor
IT Adipose tissue
Antiobesity agents
Appetite
DNA microarray technology
Drug screening
Human
Natural products, pharmaceutical
Obesity
(DNA microarray technol. in the evaluation of weight management potential of a novel calcium-potassium salt of (-)-hydroxycitric acid (Erratum))
IT 5-HT receptors
Fats and Glyceridic oils, biological studies
Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(DNA microarray technol. in the evaluation of weight management potential of a novel calcium-potassium salt of (-)-hydroxycitric acid (Erratum))
IT **27750-10-3D**, (-)-Hydroxycitric acid, calcium-potassium salt
RL: DMA (Drug mechanism of action); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(DNA microarray technol. in the evaluation of weight management potential of a novel calcium-potassium salt of (-)-hydroxycitric acid (Erratum))

L42 ANSWER 2 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:264436 HCAPLUS
DN 144:381745
ED Entered STN: 22 Mar 2006
TI DNA microarray technology in the evaluation of weight management potential of a novel calcium-potassium salt of (-)-hydroxycitric acid
AU Bagchi, Manashi; Zafra-Stone, Shirley; Sen, Chandan K.; Roy, Sashwati; **Bagchi, Debasis**
CS InterHealth Research Center, Benicia, CA, USA
SO Toxicology Mechanisms and Methods (2006), 16(2-3), 129-135
CODEN: TMMOCP; ISSN: 1537-6524

PB Taylor & Francis, Inc.
DT Journal
LA English
CC 1-10 (Pharmacology)
Section cross-reference(s): 17
AB Quality and quantity of diet and nutrients are key factors of human health and disease prevention. Mol. diagnostics and cellular signaling play a fundamental role in the usefulness of novel nutraceuticals and functional foods. Increasing knowledge of the genes and mols. involved in the development of obesity is creating new methods of obesity regulation. Traditional herbal medicines may have some potential in weight management. Botanical dietary supplements often contain complex mixts. of phytochems. that have additive or synergistic interactions. Evidence from numerous human and animal dietary studies has demonstrated the potential therapeutic effects of traditional herbal medicines in controlling obesity. We analyzed the effects of low-dose oral administration of calcium-potassium salt of (-)-hydroxycitric acid (HCA-SX) on the body weight and abdominal fat transcriptome in rats. HCA-SX restricted body weight gain in rats and lowered abdominal fat leptin expression. High-d. microarray anal. of 9960 genes and ESTs present in the fat tissue identified a small set of specific genes sensitive to dietary HCA-SX. Mitochondrial/nuclear proteins necessary for fundamental support of the tissue were not affected by HCA-SX, further demonstrating its safety. Functional characterization of HCA-SX sensitive genes revealed that up-regulation of genes encoding serotonin receptors represents a distinct effect of HCA-SX on appetite suppression.
ST DNA microarray calcium potassium hydroxycitrate antiobesity serotonin receptor
IT Adipose tissue
Antiobesity agents
Appetite
DNA microarray technology
Drug screening
Human
Natural products, pharmaceutical
Obesity
(DNA microarray technol. in the evaluation of weight management potential of a novel calcium-potassium salt of (-)-hydroxycitric acid)
IT 5-HT receptors
Fats and Glyceridic oils, biological studies
Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(DNA microarray technol. in the evaluation of weight management potential of a novel calcium-potassium salt of (-)-hydroxycitric acid)
IT **27750-10-3D**, (-)-Hydroxycitric acid, calcium-potassium salt
RL: DMA (Drug mechanism of action); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(DNA microarray technol. in the evaluation of weight management potential of a novel calcium-potassium salt of (-)-hydroxycitric acid)
RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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L42 ANSWER 3 OF 21 MEDLINE on STN
AN 2005483601 MEDLINE
DN PubMed ID: 15993998
TI **Garcinia** cambogia toxicity is misleading.
AU Burdock George; Bagchi Manashi; **Bagchi Debasis**
SO Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association, (2005 Nov) Vol. 43, No. 11, pp. 1683-4; author reply 1685-6.
Journal code: 8207483. ISSN: 0278-6915.
CM Comment on: Food Chem Toxicol. 2005 Mar;43(3):411-9. PubMed ID: 15680676
CY England: United Kingdom
DT Commentary
Letter
LA English
FS Priority Journals
EM 200511
ED Entered STN: 13 Sep 2005
Last Updated on STN: 9 Nov 2005
Entered Medline: 8 Nov 2005
CT Check Tags: Male
Animals
Citrates: TO, toxicity
Diet
***Garcinia: TO, toxicity**
Obesity: DT, drug therapy

Obesity: GE, genetics
Phytotherapy
Plant Extracts: TU, therapeutic use
Plant Extracts: TO, toxicity
Rats
Rats, Zucker
Testicular Diseases: CI, chemically induced
Testicular Diseases: PA, pathology
RN **6205-14-7 (hydroxycitric acid)**
CN 0 (Citrates); 0 (Plant Extracts)

L42 ANSWER 4 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:1050885 HCAPLUS
DN 143:299137
ED Entered STN: 30 Sep 2005
TI Methods for increasing neurotransmitter levels using hydroxycitric acid
IN **Bagchi, Debasis**; Ohia, Sunny E.; Preuss, Harry G.
PA Interhealth Nutraceuticals, Inc., USA
SO U.S. Pat. Appl. Publ., 4 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K031-19
INCL 514574000
CC 1-11 (Pharmacology)
Section cross-reference(s): 2, 4, 11, 63
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2005215644	A1	20050929	US 2005-81176	20050316
WO 2005089441	A2	20050929	WO 2005-US8942	20050318

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2004-554653P	P	20040319	
US 2005-81176	A	20050316	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2005215644	ICM	A61K031-19
	INCL	514574000
	IPCI	A61K0031-19 [ICM,7]; A61K0031-185 [ICM,7,C*]
	IPCR	A61K0031-185 [I,C*]; A61K0031-19 [I,A]
	NCL	514/574.000
WO 2005089441	IPCI	A61K [ICM,7]
	IPCR	A61K0031-185 [I,C*]; A61K0031-19 [I,A]

AB Composition and methods for increasing neurotransmitter levels of dopamine and serotonin in a subject through administration of (-)-hydroxycitric acid.
ST hydroxycitric acid pharmaceutical ext aging drug addiction mental disease; brain neurotransmitter hydroxycitric acid dopamine agonist alcoholism tobacco smoking
IT Mental and behavioral disorders

(attention deficit disorder; methods for increasing neurotransmitter levels using hydroxycitric acid)
IT Mental and behavioral disorders
(attention deficit hyperactivity disorder; methods for increasing neurotransmitter levels using hydroxycitric acid)
IT Tea products
(beverages, green; methods for increasing neurotransmitter levels using hydroxycitric acid)
IT Mental and behavioral disorders
(bipolar disorder; methods for increasing neurotransmitter levels using hydroxycitric acid)
IT Brain
(cerebral cortex; methods for increasing neurotransmitter levels using hydroxycitric acid)
IT Carbohydrates, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(cravings for; methods for increasing neurotransmitter levels using hydroxycitric acid)
IT Mental and behavioral disorders
(depression; methods for increasing neurotransmitter levels using hydroxycitric acid)
IT Aging, animal
(dysfunction due to; methods for increasing neurotransmitter levels using hydroxycitric acid)
IT Energy
(dysfunctional regulation; methods for increasing neurotransmitter levels using hydroxycitric acid)
IT Alcoholism
Alzheimer's disease
Anti-Alzheimer's agents
Antidepressants
Antiparkinsonian agents
Antipsychotics
Brain
Cognition enhancers
Cognitive disorders
Dopamine agonists
Drug dependence
Panax
Parkinson's disease
Piper methysticum
Psychotropics
Schizophrenia
Tobacco smoke
(methods for increasing neurotransmitter levels using hydroxycitric acid)
IT Neurotransmitters
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(methods for increasing neurotransmitter levels using hydroxycitric acid)
IT Natural products, pharmaceutical
RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(methods for increasing neurotransmitter levels using hydroxycitric acid)
IT Mental and behavioral disorders
(obsession-compulsion; methods for increasing neurotransmitter levels using hydroxycitric acid)
IT Drug delivery systems
(oral; methods for increasing neurotransmitter levels using

hydroxycitric acid)

IT 50-36-2, Cocaine 54-11-5, Nicotine 64-17-5, Alcohol, biological studies 300-62-9, Amphetamine
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(cravings for; methods for increasing neurotransmitter levels using hydroxycitric acid)

IT 50-67-9, Serotonin, biological studies 51-61-6, Dopamine, biological studies 54-16-0, 5-Hydroxyindoleacetic acid, biological studies 102-32-9, 3,4-Dihydroxyphenylacetic acid 306-08-1, Homovanillic acid
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(methods for increasing neurotransmitter levels using hydroxycitric acid)

IT **27750-10-3**, (-)-Hydroxycitric acid
RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(methods for increasing neurotransmitter levels using hydroxycitric acid)

IT 54910-89-3, Fluoxetine
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(methods for increasing neurotransmitter levels using hydroxycitric acid)

IT 1399-64-0, Gymnemic acid 7440-47-3, Chromium, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(methods for increasing neurotransmitter levels using hydroxycitric acid)

L42 ANSWER 5 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:34450 HCAPLUS
DN 142:120544
ED Entered STN: 14 Jan 2005
TI Compositions incorporating high-caffeine green tea extract and related methods for promoting healthy body weight
IN **Bagchi, Debasis; Kothari, Shil C.**
PA USA
SO U.S. Pat. Appl. Publ., 5 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K035-78
ICS A61K031-522; A61K031-7048; A61K031-353
INCL 424729000; 514027000; 514263310; 514456000
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 18, 62
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005008712	A1	20050113	US 2003-615887	20030708
	WO 2005014020	A1	20050217	WO 2003-US24155	20030730
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003258003	A1	20050225	AU 2003-258003	20030730

PRAI US 2003-615887 A 20030708
WO 2003-US24155 W 20030730

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2005008712	ICM	A61K035-78
	ICS	A61K031-522; A61K031-7048; A61K031-353
	INCL	424729000; 514027000; 514263310; 514456000
	IPCI	A61K0035-78 [ICM,7]; A61K0031-522 [ICS,7]; A61K0031-519 [ICS,7,C*]; A61K0031-7048 [ICS,7]; A61K0031-7042 [ICS,7,C*]; A61K0031-353 [ICS,7]; A61K0031-352 [ICS,7,C*]
	IPCR	A61K0031-352 [I,C*]; A61K0031-353 [I,A]; A61K0031-519 [I,C*]; A61K0031-522 [I,A]; A61K0031-7042 [I,C*]; A61K0031-7048 [I,A]
	NCL	424/729.000; 514/027.000; 514/263.310; 514/456.000
	ECLA	A61K031/353; A61K031/522; A61K031/7048; A61K035/78
WO 2005014020	IPCI	A61K0035-78 [ICM,7]; A61P0003-04 [ICS,7]; A61P0003-00 [ICS,7,C*]
	IPCR	A61K0031-352 [I,C*]; A61K0031-353 [I,A]; A61K0031-519 [I,C*]; A61K0031-522 [I,A]; A61K0031-7042 [I,C*]; A61K0031-7048 [I,A]
	ECLA	A61K031/353; A61K031/522; A61K031/7048; A61K035/78
AU 2003258003	IPCI	A61K0035-78 [ICM,7]; A61P0003-04 [ICS,7]; A61P0003-00 [ICS,7,C*]

AB Methods for promoting healthy body weight, increasing energy level and improving a variety of related physiol. factors include administering to those persons or other mammals effective amts. of a composition incorporating (-)-Epigallocatechin 3-gallate (EGCG) and caffeine derived from green tea, preferably in equal or nearly equal amts. The EGCG and caffeine in these amts. work synergistically to further promote healthy body weight, increase energy level and improve these physiol. factors.

ST green tea ext body wt

IT Tea products
(beverages, green; compns. incorporating high-caffeine green tea extract and related methods for promoting healthy body weight)

IT Drug delivery systems
(capsules; compns. incorporating high-caffeine green tea extract and related methods for promoting healthy body weight)

IT Beverages
Body weight
Camellia sinensis
Dentifrices
Food
Human
(compns. incorporating high-caffeine green tea extract and related methods for promoting healthy body weight)

IT Tea products
(green; compns. incorporating high-caffeine green tea extract and related methods for promoting healthy body weight)

IT Drug delivery systems
(lozenges; compns. incorporating high-caffeine green tea extract and related methods for promoting healthy body weight)

IT Drug delivery systems
(oral, sprays; compns. incorporating high-caffeine green tea extract and related methods for promoting healthy body weight)

IT Drug delivery systems
(powders; compns. incorporating high-caffeine green tea extract and related methods for promoting healthy body weight)

IT Drug delivery systems

(sprays, oral; compns. incorporating high-caffeine green tea extract and related methods for promoting healthy body weight)
IT Drug delivery systems
(tablets; compns. incorporating high-caffeine green tea extract and related methods for promoting healthy body weight)
IT Drug delivery systems
(transdermal; compns. incorporating high-caffeine green tea extract and related methods for promoting healthy body weight)
IT 58-08-2, Caffeine, biological studies 989-51-5, (-)-Epigallocatechin 3-gallate
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compns. incorporating high-caffeine green tea extract and related methods for promoting healthy body weight)

L42 ANSWER 6 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:993589 HCAPLUS
DN 143:320371
ED Entered STN: 13 Sep 2005
TI Garcinia cambogia toxicity is misleading
AU Burdock, George; Bagchi, Manashi; **Bagchi, Debasis**
CS Madhusudan Soni Burdock Group, Vero Beach, FL, 32960, USA
SO Food and Chemical Toxicology (2005), 43(11), 1683-1684
CODEN: FCTOD7; ISSN: 0278-6915
PB Elsevier Ltd.
DT Journal
LA English
CC 4-3 (Toxicology)
AB A recent article by Saito et al. (2005) reports that high doses of Garcinia cambogia extract are effective in suppressing fat accumulation in developing male Zucker obese rats, but highly toxic to the testis. A polemic in response to Saito et al. (ibid., 2005, 43, 411-419) raises several questions, such as: (1) the form of (-)-hydroxycitric acid (HCA) and toxicity; (2) exptl. study design and results; (3) Zucker rat model and testicular toxicity; and (4) dietary ingredients and testicular toxicity.
ST Garcinia hydroxycitrate testis toxicity polemic
IT Diet
Garcinia cambogia
Testis
Toxicity
(Garcinia cambogia toxicity is misleading)
IT **27750-10-3**, (-)-Hydroxycitric acid
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(Garcinia cambogia toxicity is misleading)
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Borzelleca, J; Regulatory Toxicology and Pharmacology 1992, V16, P253 MEDLINE
(2) Saito, M; Food and Chemical Toxicology 2005, V43, P411 HCAPLUS
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(6) Watson, J; The Journal of Biological Chemistry 1970, V22, P5993
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L42 ANSWER 7 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1
AN 2005:1165924 HCAPLUS
DN 143:459196
ED Entered STN: 01 Nov 2005
TI Bioefficacy of a novel calcium-potassium salt of (-)-hydroxycitric acid

AU Downs, Bernard W.; Bagchi, Manashi; Subbaraju, Gottumukkala V.; Shara, Michael A.; Preuss, Harry G.; **Bagchi, Debasis**
CS InterHealth Research Center, Benicia, CA, USA
SO Mutation Research (2005), 579(1-2), 149-162
CODEN: MUREAV; ISSN: 0027-5107
PB Elsevier B.V.
DT Journal; General Review
LA English
CC 18-0 (Animal Nutrition)
Section cross-reference(s): 14
AB A review. Obesity is associated with cardiovascular diseases, diabetes mellitus, and certain forms of cancer. Popular strategies for body weight loss often fail to address some key factors, such as body fat mass, muscle d., bone d., water mass, their inter-relationships and impact on energy production, body composition, and overall health and well-being. The (-)-hydroxycitric acid (HCA), present in exts. from dried peel of Garcinia cambogia fruit, has been reported to promote body fat loss in humans without stimulating the central nervous system. The effectiveness of G. cambogia extract is typically attributed solely to HCA, but other components may contribute to its therapeutic effectiveness. HCA is typically present in dietary body weight loss supplements as Ca salt with poor solubility (<50%) and low bioavailability. The novel Ca2+/K+ (-)-HCA salt (HCA-SX; Super CitriMax) makes HCA fully water-soluble and bioavailable. Efficacious doses of HCA-SX (4500 mg/day t.i.d.) provide 495 mg Ca (49.5% of RDI) and 720 mg K (15% of RDI). Ca2+ ions are involved in body weight management by increasing lipid metabolism, enhancing thermogenesis, and increasing bone d. K+ ions increase energy, decrease hypertension, increase muscle strength, and regulate heart arrhythmias. Both Ca and K act as buffers in pH homeostasis. In clin. trials, HCA-SX has increased serotonin availability, decreased appetite, increased fat oxidation, improved blood lipid levels, decreased body weight, and modulated several obesity regulatory genes without affecting the mitochondrial and nuclear proteins required for normal biochem. and physiol. functions.
ST review nutrition hydroxycitric acid calcium potassium salt obesity treatment
IT Human
Nutrition, animal
Obesity
(dietary supplement Super CitriMax with (-)-hydroxycitric acid calcium-potassium salt and its effectiveness in obesity treatment in humans)
IT **449158-84-3**, Super CitriMax
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(dietary supplement Super CitriMax with (-)-hydroxycitric acid calcium-potassium salt and its effectiveness in obesity treatment in humans)
RE.CNT 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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L42 ANSWER 8 OF 21 MEDLINE on STN
AN 2005678942 MEDLINE
DN PubMed ID: 16366421
TI Efficacy of a novel calcium/potassium salt of (-)-**hydroxycitric** acid in **weight** control.
AU Preuss H G; Garis R I; Bramble J D; **Bagchi D**; Bagchi M; Rao C V S; Satyanarayana S
CS Department of Physiology and Biophysics, Georgetown University Medical Center, Basic Science Building, Room 231 B, 4000 Reservoir Rd., N.W., Washington, DC 20057, USA.. preusshg@georgetown.edu
SO International journal of clinical pharmacology research, (2005) Vol. 25, No. 3, pp. 133-44.
Journal code: 8110183. ISSN: 0251-1649.
CY Switzerland
DT Journal; Article; (JOURNAL ARTICLE)

(RANDOMIZED CONTROLLED TRIAL)
(CLINICAL TRIAL)
LA English
FS Priority Journals
EM 200601
ED Entered STN: 22 Dec 2005
Last Updated on STN: 21 Jan 2006
Entered Medline: 20 Jan 2006

AB The **weight**-loss efficacy of a novel, water-soluble, calcium-potassium salt of (-)-**hydroxycitric** acid (HCA-SX) was re-examined in 90 obese subjects (BMI: 30-50.8 kg/m2). We combined data from two previously reported randomized, double-blind, placebo-controlled clinical studies in order to achieve a better statistical evaluation based on a larger population. This re-examination of data also allowed us to reflect more intensely on various aspects of **weight** loss studies. Subjects were randomly divided into three groups: group A received a daily dose of HCA-SX 4, 667 mg (providing 2,800 mg HCA per day); group B was given a daily dose of a combination of HCA-SX 4,667 mg, niacin-bound chromium (NBC) 4 mg (providing 400 microg elemental chromium), and Gymnema sylvestre extract (GSE) 400 mg (providing 100 mg gymnemic acid); and group C received a placebo in three equally divided doses 30-60 min before each meal. All subjects were provided a 2,000 kcal diet/day and participated in a supervised walking program for 30 min/day, 5 days/week. Eighty-two subjects completed the study. At the end of 8 weeks, in group A, both body **weight** and BMI decreased by 5.4%, low-density lipoprotein and triglycerides levels were reduced by 12.9% and 6.9%, respectively, while high-density lipoprotein levels increased by 8.9%, serum leptin levels decreased by 38%, serotonin levels increased by 44.5% and urinary excretion of fat metabolites increased by 32-109%. Group B demonstrated similar beneficial changes, but generally to a greater extent. No significant adverse effects were observed. The combined results confirm that HCA-SX and, to a greater degree, the combination of HCA-SX plus NBC and GSE reduce body **weight** and BMI, suppress appetite, improve blood lipid profiles, increase serum leptin and serotonin levels and increase fat oxidation more than placebo. We conclude that dosage levels, timing of administration, subject compliance and bioavailability of HCA-SX significantly affect results and that when taken as directed, HCA-SX is a highly effective adjunct to healthy **weight** control.

CT Adult
Anti-Obesity Agents: AD, administration & dosage
Anti-Obesity Agents: CH, chemistry
*Anti-Obesity Agents: TU, therapeutic use
Body Mass Index
Body Weight: DE, drug effects
*Calcium: CH, chemistry
Chromium: AD, administration & dosage
Chromium: TU, therapeutic use
Citrates: AD, administration & dosage
Citrates: CH, chemistry
***Citrates: TU, therapeutic use**
Double-Blind Method
Drug Therapy, Combination
Gymnema sylvestre: CH, chemistry
Humans
Leptin: BL, blood
Lipids: BL, blood
Middle Aged
Niacin: AD, administration & dosage
Niacin: TU, therapeutic use

*Obesity: DT, drug therapy
Plant Preparations: AD, administration & dosage
Plant Preparations: TU, therapeutic use
*Potassium: CH, chemistry
Serotonin: BL, blood
Solubility
Treatment Outcome

RN 50-67-9 (Serotonin); 59-67-6 (Niacin); **6205-14-7 (hydroxycitric acid)**; 7440-09-7 (Potassium); 7440-47-3 (Chromium); 7440-70-2 (Calcium)

CN 0 (Anti-Obesity Agents); 0 (Citrates); 0 (Leptin); 0 (Lipids); 0 (Plant Preparations)

L42 ANSWER 9 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:780373 HCAPLUS
DN 141:289062
ED Entered STN: 24 Sep 2004
TI Method and composition with hydroxycitric acid for **decreasing ghrelin** levels
IN **Bagchi, Debasis; Kothari, Shil**
PA Interhealth Nutraceuticals, Inc., USA
SO U.S. Pat. Appl. Publ., 8 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K031-19
INCL 514574000
CC 1-10 (Pharmacology)
Section cross-reference(s): 63
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004186181	A1	20040923	US 2004-805129	20040319
WO 2004085462	A2	20041007	WO 2004-US8474	20040319
WO 2004085462	A3	20051013		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2003-456592P P 20030321

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004186181	ICM	A61K031-19
	INCL	514574000
	IPCI	A61K0031-19 [ICM,7]; A61K0031-185 [ICM,7,C*]
	IPCR	A61K0031-185 [I,C*]; A61K0031-19 [I,A]; A61K0033-24 [I,A]; A61K0033-24 [I,C*]
	NCL	514/574.000
	ECLA	A61K031/19; A61K031/19+M; A61K033/24+M; A61K035/78+M
WO 2004085462	IPCI	C07K [ICM,7]; A61K0031-19 [ICS,7]; A61K0031-185 [ICS,7,C*]
	IPCR	A61K0031-185 [I,C*]; A61K0031-19 [I,A]; A61K0033-24

[I,A]; A61K0033-24 [I,C*]
ECLA A61K031/19; A61K031/19+M; A61K033/24+M; A61K035/78+M

AB A method and composition are disclosed for reducing **ghrelin** levels in a person or other mammal. The method involves administration of a composition incorporating (-)-hydroxycitric acid in an amount sufficient to **decrease** the **ghrelin** levels in a person or other mammal. The composition comprises (-)-hydroxycitric acid in an amount sufficient to **decrease** the **ghrelin** levels in the person or other mammal. The composition of the method and related composition can also incorporate gymnemic acid, green tea extract, and oxygen coordinated niacin-bound chromium. The method and related composition are effective in reducing **ghrelin** levels in a person or mammal, which decreases feelings of hunger in a person or other mammal and allow for effective weight management. Administration of (-)-hydroxycitric acid-SX (HCA-SX) from Garcinia cambogia and HCA-SX + chromium + gymnemic acid reduced food intake by 11.4 % and 17.2 %, resp., compared to placebo.

ST hydroxycitrate **decreasing ghrelin** hunger; chromium hydroxycitrate gymnemate redn food intake

IT Gymnema
Gymnema sylvestre
(composition further comprising gymnemic acid from; hydroxycitric acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT Gymnemic acids
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(composition further comprising; hydroxycitric acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT Tea products
(green, extract of, composition further comprising; hydroxycitric acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT Feeding
(hydroxycitric acid administration prior to; hydroxycitric acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT Body weight
Human
Mammalia
(hydroxycitric acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT Garcinia
Garcinia cambogia
(hydroxycitric acid from; hydroxycitric acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT Body weight
(loss; hydroxycitric acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT Food
(reduction of intake of; hydroxycitric acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT Alkali metal salts
Alkaline earth salts
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(with hydroxycitric acid; hydroxycitric acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT 58-08-2, Caffeine, biological studies 989-51-5, Epigallocatechin gallate 3081-61-6, Theanine

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(composition further comprising green tea extract containing; hydroxycitric acid
for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT 59-67-6D, Niacin, Chromium complexes 7440-47-3, Chromium, biological studies 7440-47-3D, Chromium, complexes with niacin
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(composition further comprising; hydroxycitric acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT 761458-24-6, HCA-SX 762247-04-1
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(food intake reduction with; hydroxycitric acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT **304853-26-7, Ghrelin**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(hydroxycitric acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

IT 7439-93-2D, Lithium, salts with hydroxycitric acid 7439-95-4D, Magnesium, salts with hydroxycitric acid 7440-09-7D, Potassium, salts with hydroxycitric acid 7440-14-4D, Radium, salts with hydroxycitric acid 7440-23-5D, Sodium, salts with hydroxycitric acid 7440-24-6D, Strontium, salts with hydroxycitric acid 7440-39-3D, Barium, salts with hydroxycitric acid 7440-41-7D, Beryllium, salts with hydroxycitric acid 7440-46-2D, Cesium, salts with hydroxycitric acid 7440-70-2D, Calcium, salts with hydroxycitric acid 7440-73-5D, Francium, salts with hydroxycitric acid **27750-10-3**, (-)-Hydroxycitric acid **27750-10-3D**, Hydroxycitric acid, group IA metal salts, group IIA metal salts **64913-19-5 132436-67-0 185196-38-7 213385-58-1 449158-84-3 760962-71-8 761426-32-8**, Cesium hydroxycitrate **761426-33-9**, Francium hydroxycitrate **761426-34-0**, Beryllium hydroxycitrate **761426-35-1**, Strontium hydroxycitrate **761426-36-2**, Barium hydroxycitrate **761426-37-3**, Radium hydroxycitrate
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hydroxycitric acid for **decreasing ghrelin** levels and **decreasing** feelings of hunger)

L42 ANSWER 10 OF 21 MEDLINE on STN
AN 2004332602 MEDLINE
DN PubMed ID: 15234082
TI Safety assessment of (-)-**hydroxycitric** acid and Super CitriMax, a novel calcium/potassium salt.
AU Soni M G; Burdock G A; Preuss H G; Stohs S J; Ohia S E; **Bagchi D**
CS Burdock Group, 780 US Highway 1, Suite 300, Vero Beach, FL 32962, USA.. msoni@burdockgroup.com
SO Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association, (2004 Sep) Vol. 42, No. 9, pp. 1513-29. Ref: 82
Journal code: 8207483. ISSN: 0278-6915.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LA English
FS Priority Journals
EM 200408

ED Entered STN: 7 Jul 2004
Last Updated on STN: 11 Aug 2004
Entered Medline: 10 Aug 2004

AB (-)-**Hydroxycitric** acid (HCA) is a principle constituent (10-30%) of the dried fruit rind of **Garcinia** cambogia, a plant native to Southeastern Asia. The dried rind has been used for centuries throughout Southeast Asia as a food preservative, flavoring agent and carminative. Extensive experimental studies show that HCA inhibits fat synthesis and reduces food intake. The objective of this review is to systematically review the available safety/toxicity literature on HCA to determine its safety in-use. The primary mechanism of action of HCA appears to be related to its ability to act as a competitive inhibitor of the enzyme ATP-citrate lyase, which catalyzes the conversion of citrate and coenzyme A to oxaloacetate and acetyl coenzyme A (acetyl-CoA), primary building blocks of fatty acid and cholesterol synthesis. Super CitriMax, a novel calcium/potassium-HCA extract (HCA-SX), is considerably more soluble and bioavailable than calcium-based HCA ingredients. Acute oral toxicity studies in animals demonstrate that CitriMax (50% HCA as calcium salt) has a low acute oral toxicity. In a subchronic study in rats, the gavage administration of HCA-SX at doses up to 2500 mg/kg/day for a period of 90 days caused a significant decrease in body **weight** and reduction in feed consumption without any adverse effects. The structure, mechanism of action, long history of use of HCA and other toxicity studies indicate that HCA-SX is unlikely to cause reproductive or developmental effects. HCA-SX was not mutagenic in the presence or absence of metabolic activation in Ames genotoxicity assays in strains TA98 and TA102. HCA-SX-induced increases in number of revertants in other strains (TA100 and TA1535 in the absence of metabolic activation and in strain TA1537 in the presence of metabolic activation) but these were not considered as biologically indicative of a mutagenic effect. In several, placebo-controlled, double-blind trials employing up to 2800 mg/day HCA, no treatment-related adverse effects were reported. There is sufficient qualitative and quantitative scientific evidence, including animal and human data suggesting that intake of HCA at levels up to 2800 mg/day is safe for human consumption.

CT Animals
*Appetite Depressants: TO, toxicity
***Citrates: TO, toxicity**
Dose-Response Relationship, Drug
*Food Additives: TO, toxicity
***Garcinia cambogia: CH, chemistry**
Humans
*Plant Extracts: TO, toxicity
Risk Assessment
Toxicity Tests

RN **6205-14-7 (hydroxycitric acid)**

CN 0 (Appetite Depressants); 0 (Citrates); 0 (Food Additives); 0 (Plant Extracts)

L42 ANSWER 11 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
AN 2004:554747 HCAPLUS
DN 141:313510
ED Entered STN: 12 Jul 2004
TI Body weight and abdominal fat gene expression profile in response to a novel hydroxycitric acid-based dietary supplement
AU Roy, Sashwati; Rink, Cameron; Khanna, Savita; Phillips, Christina; **Bagchi, Debasis**; Bagchi, Manashi; Sen, Chandan K.
CS Laboratory of Molecular Medicine, Department of Surgery, The Ohio State University Medical Center, Columbus, OH, 43210, USA
SO Gene Expression (2004), Volume Date 2003, 11(5/6), 251-262

CODEN: GEEXEJ; ISSN: 1052-2166
PB Cognizant Communication Corp.
DT Journal
LA English
CC 18-7 (Animal Nutrition)
AB Obesity is a global public health problem, with .apprx.315 million people worldwide estimated to fall into the WHO-defined obesity categories. Botanical dietary supplements often contain complex mixts. of phytochems. with additive and/or synergistic interactions. The dried fruit rind of Garcinia cambogia, (Malabar tamarind) is a unique source of (-)-hydroxycitric acid (HCA) with distinct sour taste. It has been safely used for centuries in Southeastern Asia to make meals more filling. The HCA-SX (Super Citrimax; novel derivative of HCA) dietary supplement is safe when taken orally. HCA-SX is bioavailable as determined by GC-MS anal. of human blood plasma. Although HCA-SX is conditionally effective in body weight management in exptl. animals and humans, its mechanism of action remains unclear. The effects of low-dose oral HCA-SX treatment on body weight and abdominal fat gene expression profile were studied in adult Sprague-Dawley rats. At doses relevant for human consumption, the dietary HCA-SX contained body weight growth. This was associated with decreased abdominal fat leptin expression, while plasma leptin levels remained unaffected. Repeated high-d. microarray anal. of 9960 genes and ESTs present in the fatty tissue identified a small set (.apprx.1% of all genes screened) of specific genes sensitive to dietary HCA-SX. Other genes, including vital genes transcribing for mitochondrial/nuclear proteins and which are necessary for fundamental support of the tissue, were not affected by HCA-SX. Under these exptl. conditions, HCA-SX was effective in restricting body weight gain in adult rats. Functional characterization of HCA-SX-sensitive genes revealed that upregulation of genes encoding serotonin receptors was a distinct effect of dietary HCA-SX supplementation.
ST nutrition hydroxycitrate supplement body wt adipose tissue gene expression
IT Transport proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GLUT-1 (glucose transporter 1); body weight and abdominal fat gene expression profile in response to novel hydroxycitric acid-based dietary supplement Super Citrimax in adult Sprague-Dawley rats)
IT Transport proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GLUT-4 (glucose transporter 4); body weight and abdominal fat gene expression profile in response to novel hydroxycitric acid-based dietary supplement Super Citrimax in adult Sprague-Dawley rats)
IT Adipose tissue
Blood plasma
Body weight
Gene expression profiles, animal
Nutrition, animal
(body weight and abdominal fat gene expression profile in response to novel hydroxycitric acid-based dietary supplement Super Citrimax in adult Sprague-Dawley rats)
IT 169494-85-3, Leptin
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(body weight and abdominal fat gene expression profile in response to novel hydroxycitric acid-based dietary supplement Super Citrimax in adult Sprague-Dawley rats)
IT **27750-10-3**, (-)-Hydroxycitric acid
RL: BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(body weight and abdominal fat gene expression profile in response to novel hydroxycitric acid-based dietary supplement Super Citrimax in

adult Sprague-Dawley rats)
IT **449158-84-3**, Super Citrimax;
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(body weight and abdominal fat gene expression profile in response to novel hydroxycitric acid-based dietary supplement Super Citrimax in adult Sprague-Dawley rats)
RE.CNT 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L42 ANSWER 12 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3
AN 2004:350574 HCAPLUS
DN 141:17433
ED Entered STN: 30 Apr 2004
TI Physico-chemical properties of a novel (-)-hydroxycitric acid extract and its effect on body weight, selected organ weights, hepatic lipid peroxidation and DNA fragmentation, hematology and clinical chemistry, and histopathological changes over a period of 90 days
AU Shara, Michael; Ohia, Sunny E.; Schmidt, Robert E.; Yasmin, Taharat; Zardetta-Smith, Andrea; Kincaid, Anthony; Bagchi, Manashi; Chatterjee, Archana; **Bagchi, Debasis**; Stohs, Sidney J.
CS School of Pharmacy and Health Professions, Department of Pharmacy Sciences, Creighton University Medical Center, Omaha, NE, USA
SO Molecular and Cellular Biochemistry (2004), 260(1&2), 171-186
CODEN: MCBIB8; ISSN: 0300-8177
PB Kluwer Academic Publishers
DT Journal
LA English
CC 1-11 (Pharmacology)
AB Garcinia cambogia-derived (-)-hydroxycitric acid (HCA) is a popular and natural supplement for weight management. HCA is a competitive inhibitor of the enzyme ATP citrate lyase, which catalyzes the conversion of citrate and CoA to oxaloacetate and acetyl CoA (acetyl CoA) in the cytosol. Acetyl CoA is used in the synthesis of fatty acids, cholesterol and triglycerides, and in the synthesis of acetylcholine in the central nervous system. Studies have demonstrated the efficacy of a novel 60% calcium-potassium salt of HCA derived from Garcinia cambogia (HCA-SX, Super CitriMax) in weight management. Results have shown that HCA-SX promotes fat oxidation, enhances serotonin release and availability in the brain cortex, normalizes lipid profiles, and lowers serum leptin levels in obese subjects. Acute oral, acute dermal, primary dermal irritation and primary eye irritation toxicity, as well as Ames bacterial reverse mutation studies and mouse lymphoma tests have demonstrated the safety of HCA-SX. However, no detailed long-term safety of HCA-SX or any other HCA extract has been previously assessed. We evaluated the dose- and time-dependent effects of HCA-SX in Sprague-Dawley rats on body weight, selected organ wts., hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin. chemical over a period of 90 days. Furthermore, a 90-day histopathol. evaluation was conducted. The animals were treated with 0, 0.2, 2.0 and 5.0% HCA-SX of feed intake and were sacrificed on 30, 60 or 90 days of treatment. The body weight and selected organ wts. were assessed and correlated as a % of body weight and brain weight at 90 days of treatment. A significant reduction in body weight was observed in treated rats as compared to control animals. An advancing age-induced marginal increase in hepatic lipid peroxidn. was observed in both male and female rats, while no such difference in hepatic DNA fragmentation was observed as compared to the control animals. Furthermore, selected organ wts. individually and as a % of body weight and brain weight at 90 days of treatment exhibited no significant difference between the groups. No difference was observed in hematol. and clin. chemical or the histopathol. evaluation. Taken together, these results show that 90 day treatment of HCA-SX results in a reduction in body weight, and does not cause any changes in major organs or in hematol., clin. chemical, and histopathol.
ST hydroxycitrate body wt liver lipid peroxidn DNA fragmentation hematol; Super CitriMax antiobesity obese liver lipid peroxidn organ wt
IT Antiobesity agents
Body weight

Garcinia cambogia
Lipid peroxidation
Obesity
(effect (-)-hydroxycitric acid extract on body weight, selected organ wts., hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin. chemical, and histopathol. changes over a period of 90 days)

IT DNA fragmentation
Lipid peroxidation
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(effect (-)-hydroxycitric acid extract on body weight, selected organ wts., hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin. chemical, and histopathol. changes over a period of 90 days)

IT Natural products, pharmaceutical
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(effect (-)-hydroxycitric acid extract on body weight, selected organ wts., hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin. chemical, and histopathol. changes over a period of 90 days)

IT Adrenal gland
Brain
Heart
Kidney
Liver
Ovary
Prostate gland
Seminal vesicle
Spleen
Thymus gland
Uterus
(weight; effect (-)-hydroxycitric acid extract on body weight, selected organ wts., hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin. chemical, and histopathol. changes over a period of 90 days)

IT **449158-84-3**, Super CitriMax
RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(effect (-)-hydroxycitric acid extract on body weight, selected organ wts., hepatic lipid peroxidn. and DNA fragmentation, hematol. and clin. chemical, and histopathol. changes over a period of 90 days)

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L42 ANSWER 13 OF 21 MEDLINE on STN
AN 2004163178 MEDLINE
DN PubMed ID: 15056124
TI Effects of a natural extract of (-)-**hydroxycitric** acid (HCA-SX) and a combination of HCA-SX plus niacin-bound chromium and Gymnema sylvestre extract on **weight** loss.
AU Preuss H G; **Bagchi D**; Bagchi M; Rao C V S; Dey D K; Satyanarayana S
CS Department of Physiology and Biophysics, Georgetown University Medical Center, Georgetown, Washington, DC 20057, USA.. preusshg@georgetown.edu
SO Diabetes, obesity & metabolism, (2004 May) Vol. 6, No. 3, pp. 171-80. Journal code: 100883645. ISSN: 1462-8902.
CM Comment in: Diabetes Obes Metab. 2004 Nov;6(6):458-9; author reply 460-1. PubMed ID: 15479223
CY England: United Kingdom
DT (CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LA English
FS Priority Journals
EM 200407
ED Entered STN: 2 Apr 2004
Last Updated on STN: 21 Jul 2004
Entered Medline: 20 Jul 2004
AB AIM: The efficacy of optimal doses of highly bioavailable (-)-**hydroxycitric** acid (HCA-SX) alone and in combination with niacin-bound chromium (NBC) and a standardized Gymnema sylvestre extract (GSE) on **weight** loss in moderately obese subjects was evaluated by monitoring changes in body **weight**, body mass index (BMI), appetite, lipid profiles, serum leptin and excretion of urinary fat metabolites. HCA-SX has been shown to reduce appetite, inhibit fat synthesis and decrease body **weight** without stimulating the central nervous system. NBC has demonstrated its ability to maintain healthy insulin levels, while GSE has been shown to regulate **weight** loss and blood sugar levels. METHODS: A randomized, double-blind, placebo-controlled human study was conducted in Elluru, India for 8 weeks in 60 moderately obese subjects (ages 21-50, BMI >26 kg/m(2)). Subjects were randomly divided into three groups. Group A was administered HCA-SX 4667 mg, group B was administered a combination of HCA-SX 4667 mg, NBC 4 mg and GSE 400 mg, while group C was given placebo daily in three equally divided doses 30-60 min before meals. All subjects received a 2000 kcal diet/day and participated in supervised walking. RESULTS: At the end of 8 weeks, body **weight** and BMI decreased by 5-6% in both groups A and B. Food intake, total cholesterol, low-density lipoproteins, triglycerides and serum leptin levels were significantly reduced in both groups, while high-density lipoprotein levels and excretion of urinary fat metabolites increased in both groups. A marginal or non-significant effect was observed in all parameters in group C. CONCLUSION: The present study shows that optimal doses of HCA-SX and, to a greater degree, the combination of HCA-SX, NBC and GSE can serve as an effective and safe **weight**-loss formula that can facilitate a reduction in excess body **weight** and BMI, while promoting healthy blood lipid levels.
CT Check Tags: Female

Adult
Appetite: DE, drug effects
Biological Markers: AN, analysis
Body Mass Index
*Chromium: AD, administration & dosage
***Citrates: AD, administration & dosage**
Double-Blind Method
Drug Therapy, Combination
Fats: ME, metabolism
*Gymnema sylvestre
Humans
Leptin: BL, blood
Lipids: BL, blood
Lipoproteins, HDL: BL, blood
Lipoproteins, LDL: BL, blood
Middle Aged
Niacin
Obesity: BL, blood
*Obesity: DT, drug therapy
Obesity: UR, urine
Plant Extracts: TU, therapeutic use
Weight Loss: DE, drug effects

RN 59-67-6 (Niacin); **6205-14-7 (hydroxycitric acid)**; 7440-47-3 (Chromium)
CN 0 (Biological Markers); 0 (Citrates); 0 (Fats); 0 (Leptin); 0 (Lipids); 0 (Lipoproteins, HDL); 0 (Lipoproteins, LDL); 0 (Plant Extracts)

L42 ANSWER 14 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:78695 HCAPLUS
DN 140:264206
ED Entered STN: 30 Jan 2004
TI Efficacy of a novel, natural extract of (-)-hydroxycitric acid (HCA-SX) and a combination of HCA-SX, niacin-bound chromium and Gymnema sylvestre extract in weight management in human volunteers: a pilot study
AU Preuss, Harry G.; **Bagchi, Debasis**; Bagchi, Manashi; Rao, C. V. Sanyasi; Satyanarayana, S.; Dey, Dipak K.
CS Dept. of Physiology and Biophysics, Georgetown University Medical Center, Washington, DC, 20057, USA
SO Nutrition Research (New York, NY, United States) (2004), 24(1), 45-58
CODEN: NTRSDC; ISSN: 0271-5317
PB Elsevier Science Inc.
DT Journal
LA English
CC 1-10 (Pharmacology)
AB In this pilot study, the efficacy of a novel, natural extract of a highly bioavailable, calcium-potassium salt of (-)-hydroxycitric acid (HCA-SX) alone and in combination with a niacin-bound chromium (NBC) and Gymnema sylvestra extract (GSE) was evaluated for weight loss in moderately obese subjects by monitoring changes in body weight, body mass index (BMI), appetite, lipid profiles, serum leptin and serotonin levels, and enhanced excretion of urinary fat metabolites. Garcinia cambogia-derived (-)-hydroxycitric acid (HCA) has been shown to reduce appetite, inhibit fat synthesis and decrease body weight without stimulating the central nervous system. NBC has shown the ability to restore insulin function, metabolize fat, turn protein into muscle, and convert sugar into energy, which plays a role in appetite regulation and facilitates weight loss. Gymnema sylvestre is a traditional herb that helps to promote weight loss possibly through its ability to reduce cravings for sweets and control blood sugar levels. A randomized, double-blind, placebo-controlled human clin. study was conducted in thirty obese subjects (ages 21-50, BMI>26

kg/m2) for eight weeks in Elluru, India. The subjects were randomly divided into three groups (10 subjects/group) and given HCA-SX 4,667 mg (60% HCA providing 2,800 mg HCA/day) (Group A), a combination of HCA-SX 4,667 mg, NBC 4 mg (providing 400 μg elemental Cr) and GSE 400 mg (providing 100 mg gymnemic acid) (Group B), or placebo (Group C) daily in 3 equally divided doses 30-60 min before each meal. This HCA-SX dose was extrapolated from previously conducted in vitro and in vivo studies. In addition, subjects received 2,000 kcal diet/day and underwent a 30 min/day supervised walking program, 5 days/wk. At the end of 8 wk, body weight and BMI decreased by 6.3%, resp., in Group A. Food intake was reduced by 4%. Total cholesterol, LDL and triglycerides levels were reduced by 6.3%, 12.3% and 8.6%, resp., while HDL and serotonin levels increased by 10.7% and 40%, resp. Serum leptin levels were decreased by 36.6%, and the enhanced excretion of urinary fat metabolites, including malondialdehyde (MDA), acetaldehyde (ACT), formaldehyde (FA) and acetone (ACON), increased by 125-258%. Under these same conditions, Group B reduced body weight and BMI by 7.8% and 7.9%, resp. Food intake was reduced by 14.1%. Total cholesterol, LDL and triglyceride levels were reduced by 9.1%, 17.9% and 18.1%, resp., while HDL and serotonin levels increased by 20.7% and 50%, resp. Serum leptin levels decreased by 40.5% and enhanced excretion of urinary fat metabolites increased by 146-281%. Group C reduced body weight and BMI by only 1.6% and 1.7%, resp., food intake was increased by 2.8%, and LDL, triglycerides and total cholesterol decreased by 0.8%, 0.2% and 0.8%, resp. HDL were reduced by 4.1% while serum leptin levels were increased by 0.3%, and excretion of urinary fat metabolites did not change in MDA, ACT and FA, and marginally increased in the case of ACON. No adverse effects were observed Results demonstrate that HCA-SX and, to a greater degree, the combination of HCA-SX, NBC and GSE can serve as safe weight management supplements.

ST hydroxycitrate niacin chromium Gymnema ext obesity

IT Glycerides, biological studies
Lipids, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(blood; efficacy of a novel, natural extract of (-)-hydroxycitric acid (HCA-SX) and a combination of HCA-SX, niacin-bound chromium and Gymnema sylvestre extract in weight management in human volunteers: a pilot study)

IT Appetite depressants
Drug interactions
Gymnema sylvestre
Human
Obesity
(efficacy of a novel, natural extract of (-)-hydroxycitric acid (HCA-SX) and a combination of HCA-SX, niacin-bound chromium and Gymnema sylvestre extract in weight management in human volunteers: a pilot study)

IT High-density lipoproteins
Low-density lipoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(efficacy of a novel, natural extract of (-)-hydroxycitric acid (HCA-SX) and a combination of HCA-SX, niacin-bound chromium and Gymnema sylvestre extract in weight management in human volunteers: a pilot study)

IT 50-00-0, Formaldehyde, biological studies 50-67-9, Serotonin, biological studies 57-88-5, Cholesterol, biological studies 67-64-1, Acetone, biological studies 75-07-0, Acetaldehyde, biological studies 542-78-9, Malondialdehyde 169494-85-3, Leptin
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(efficacy of a novel, natural extract of (-)-hydroxycitric acid (HCA-SX) and a combination of HCA-SX, niacin-bound chromium and Gymnema sylvestre extract in weight management in human volunteers: a pilot study)

IT 59-67-6, Niacin, biological studies 7440-47-3, Chromium, biological studies **27750-10-3**, (-)-Hydroxycitric acid

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(efficacy of a novel, natural extract of (-)-hydroxycitric acid (HCA-SX) and a combination of HCA-SX, niacin-bound chromium and Gymnema sylvestre extract in weight management in human volunteers: a pilot study)

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L42 ANSWER 15 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:376628 HCAPLUS
DN 138:348725

ED Entered STN: 16 May 2003
TI Method and composition using niacin-bound chromium for preventing or reducing the symptoms of insulin resistance syndrome
IN **Bagchi, Debasis**; Preuss, Harry G.; **Kothari, Shil C.**
PA Interhealth Nutraceuticals, Inc., USA
SO PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K031-28
ICS A61K031-44
CC 1-10 (Pharmacology)
Section cross-reference(s): 63
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003039535	A1	20030515	WO 2002-US31987	20021007
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
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	CA 2462158	AA	20030515	CA 2002-2462158	20021007
	EP 1438038	A1	20040721	EP 2002-786372	20021007
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
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PRAI	US 2001-327896P	P	20011005		
	US 2002-265093	A3	20021004		
	WO 2002-US31987	W	20021007		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003039535	ICM	A61K031-28
	ICS	A61K031-44
	IPCI	A61K0031-28 [ICM,7]; A61K0031-44 [ICS,7]
	IPCR	A61K0031-045 [I,C*]; A61K0031-05 [I,A]; A61K0031-095 [I,A]; A61K0031-095 [I,C*]; A61K0031-185 [I,A]; A61K0031-185 [I,C*]; A61K0031-194 [I,A]; A61K0031-28 [I,A]; A61K0031-28 [I,C*]; A61K0031-44 [I,A]; A61K0031-44 [I,C*]; A61K0031-455 [I,A]; A61K0031-455 [I,C*]; A61K0033-04 [I,A]; A61K0033-04 [I,C*]; A61K0033-30 [I,A]; A61K0033-30 [I,C*]
	ECLA	A61K031/28; A61K031/44
US 2003133992	IPCI	A61K0033-32 [ICM,7]; A61K0033-04 [ICS,7]; A61K0031-7048 [ICS,7]; A61K0031-7042 [ICS,7,C*]; A61K0031-704 [ICS,7]; A61K0031-7028 [ICS,7,C*]; A61K0031-095 [ICS,7]; A61K0031-05 [ICS,7]; A61K0031-045 [ICS,7,C*]; A61K0031-19 [ICS,7]; A61K0031-185 [ICS,7,C*]
	IPCR	A61K0031-045 [I,C*]; A61K0031-05 [I,A]; A61K0031-095 [I,A]; A61K0031-095 [I,C*]; A61K0031-185 [I,C*];

		A61K0031-19 [I,A]; A61K0031-555 [I,A]; A61K0031-555 [I,C*]; A61K0031-7028 [I,C*]; A61K0031-704 [I,A]; A61K0031-7042 [I,C*]; A61K0031-7048 [I,A]; A61K0033-04 [I,A]; A61K0033-04 [I,C*]; A61K0033-32 [I,A]; A61K0033-32 [I,C*]
	NCL	424/643.000; 424/702.000; 514/027.000; 514/033.000; 514/184.000; 514/557.000; 514/574.000; 514/706.000; 514/733.000
	ECLA	A61K031/05; A61K031/05+M; A61K031/095; A61K031/095+M; A61K031/19; A61K031/19+M; A61K031/704; A61K031/704+M; A61K031/7048; A61K031/7048+M; A61K033/04+M; A61K033/24+M; A61K033/30+M; A61K045/06
CA 2462158	IPCI	A61K0031-28 [ICM,7]; A61K0031-44 [ICS,7]
	ECLA	A61K031/28; A61K031/44
EP 1438038	IPCI	A61K0031-28 [ICM,7]; A61K0031-44 [ICS,7]
	IPCR	A61K0031-045 [I,C*]; A61K0031-05 [I,A]; A61K0031-095 [I,A]; A61K0031-095 [I,C*]; A61K0031-185 [I,A]; A61K0031-185 [I,C*]; A61K0031-194 [I,A]; A61K0031-28 [I,A]; A61K0031-28 [I,C*]; A61K0031-44 [I,A]; A61K0031-44 [I,C*]; A61K0031-455 [I,A]; A61K0031-455 [I,C*]; A61K0033-04 [I,A]; A61K0033-04 [I,C*]; A61K0033-30 [I,A]; A61K0033-30 [I,C*]
	ECLA	A61K031/28; A61K031/44
JP 2005508371	IPCI	A61K0031-455 [ICM,7]; A61K0031-05 [ICS,7]; A61K0031-045 [ICS,7,C*]; A61K0031-10 [ICS,7]; A61K0031-095 [ICS,7,C*]; A61K0031-194 [ICS,7]; A61K0031-185 [ICS,7,C*]; A61K0031-353 [ICS,7]; A61K0031-352 [ICS,7,C*]; A61K0031-704 [ICS,7]; A61K0031-7028 [ICS,7,C*]; A61K0033-04 [ICS,7]; A61K0033-24 [ICS,7]; A61K0033-30 [ICS,7]; A61P0003-04 [ICS,7]; A61P0003-06 [ICS,7]; A61P0003-10 [ICS,7]; A61P0003-00 [ICS,7,C*]; A61P0005-50 [ICS,7]; A61P0005-00 [ICS,7,C*]; A61P0009-10 [ICS,7]; A61P0009-12 [ICS,7]; A61P0009-00 [ICS,7,C*]; C07D0213-80 [ICS,7]; C07D0213-00 [ICS,7,C*]
	IPCR	A61K0031-045 [I,C*]; A61K0031-05 [I,A]; A61K0031-095 [I,A]; A61K0031-095 [I,C*]; A61K0031-185 [I,A]; A61K0031-185 [I,C*]; A61K0031-194 [I,A]; A61K0031-28 [I,A]; A61K0031-28 [I,C*]; A61K0031-44 [I,A]; A61K0031-44 [I,C*]; A61K0031-455 [I,A]; A61K0031-455 [I,C*]; A61K0033-04 [I,A]; A61K0033-04 [I,C*]; A61K0033-30 [I,A]; A61K0033-30 [I,C*]
	FTERM	4C055/AA01; 4C055/BA01; 4C055/CA57; 4C055/DA01; 4C055/GA01; 4C086/AA01; 4C086/AA02; 4C086/BA08; 4C086/BC19; 4C086/EA19; 4C086/HA03; 4C086/HA08; 4C086/MA03; 4C086/MA04; 4C086/MA52; 4C086/NA14; 4C086/ZA36; 4C086/ZA42; 4C086/ZA45; 4C086/ZA70; 4C086/ZB22; 4C086/ZC03; 4C086/ZC33; 4C086/ZC35; 4C206/AA01; 4C206/AA02; 4C206/CA19; 4C206/DA39; 4C206/JA22; 4C206/KA04; 4C206/KA17; 4C206/MA03; 4C206/MA04; 4C206/MA72; 4C206/NA14; 4C206/ZA36; 4C206/ZA42; 4C206/ZA45; 4C206/ZA70; 4C206/ZB22; 4C206/ZC03; 4C206/ZC33; 4C206/ZC35
ZA 2004002688	IPCI	A61K0031-28 [ICM]
	ECLA	A61K031/28; A61K031/44
US 2005100614	IPCI	A61K0031-555 [ICM,7]; A61K0031-704 [ICS,7]; A61K0031-7028 [ICS,7,C*]; A61K0031-7048 [ICS,7]; A61K0031-7042 [ICS,7,C*]; A61K0031-05 [ICS,7]; A61K0031-045 [ICS,7,C*]; A61K0033-04 [ICS,7]; A61K0033-32 [ICS,7]; A61K0031-19 [ICS,7]; A61K0031-185 [ICS,7,C*]

IPCR A61K0031-045 [I,C*]; A61K0031-05 [I,A]; A61K0031-095 [I,A]; A61K0031-095 [I,C*]; A61K0031-185 [I,C*]; A61K0031-19 [I,A]; A61K0031-555 [I,A]; A61K0031-555 [I,C*]; A61K0031-7028 [I,C*]; A61K0031-704 [I,A]; A61K0031-7042 [I,C*]; A61K0031-7048 [I,A]; A61K0033-04 [I,A]; A61K0033-04 [I,C*]; A61K0033-32 [I,A]; A61K0033-32 [I,C*]
NCL 424/643.000; 424/702.000; 514/027.000; 514/033.000; 514/184.000; 514/456.000; 514/517.000; 514/574.000; 514/733.000
ECLA A61K031/05; A61K031/05+M; A61K031/095; A61K031/095+M; A61K031/19; A61K031/19+M; A61K031/704; A61K031/704+M; A61K031/7048; A61K031/7048+M; A61K033/04+M; A61K033/24+M; A61K033/30+M; A61K045/06

US 2005202101 IPCI A61K0031-555 [ICM,7]; A61K0033-04 [ICS,7]; A61K0031-19 [ICS,7]; A61K0031-185 [ICS,7,C*]
IPCR A61K0031-045 [I,C*]; A61K0031-05 [I,A]; A61K0031-095 [I,A]; A61K0031-095 [I,C*]; A61K0031-185 [I,C*]; A61K0031-19 [I,A]; A61K0031-555 [I,A]; A61K0031-555 [I,C*]; A61K0031-7028 [I,C*]; A61K0031-704 [I,A]; A61K0031-7042 [I,C*]; A61K0031-7048 [I,A]; A61K0033-04 [I,A]; A61K0033-04 [I,C*]; A61K0033-32 [I,A]; A61K0033-32 [I,C*]
NCL 424/641.000; 424/702.000; 514/184.000; 514/574.000; 514/733.000
ECLA A61K031/05; A61K031/05+M; A61K031/095; A61K031/095+M; A61K031/19; A61K031/19+M; A61K031/704; A61K031/704+M; A61K031/7048; A61K031/7048+M; A61K033/04+M; A61K033/24+M; A61K033/30+M; A61K045/06

AB A method for preventing and or reducing the symptoms of insulin resistance and a related syndrome in persons comprises identifying persons having or at risk for having such symptoms and administering to them an effective amount of a composition comprising niacin-bound chromium that prevents or reduces the symptoms. Compns. incorporating niacin-bound chromium and addnl. compds. also are disclosed that are particularly effective in synergistically preventing or reducing these symptoms.

ST insulin resistance syndrome treatment niacin bound chromium

IT Aglycons
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(anthocyanidins; niacin-bound chromium for preventing or reducing symptoms of insulin resistance syndrome, and use with other agents)

IT Drug delivery systems
Human
(niacin-bound chromium for preventing or reducing symptoms of insulin resistance syndrome)

IT Saponins
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(niacin-bound chromium for preventing or reducing symptoms of insulin resistance syndrome, and use with other agents)

IT 9004-10-8, Insulin, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(niacin-bound chromium for preventing or reducing symptoms of insulin resistance syndrome)

IT 59-67-6D, Niacin, chromium-bound, biological studies 7440-47-3D, Chromium, niacin-bound
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(niacin-bound chromium for preventing or reducing symptoms of insulin resistance syndrome)

IT 501-36-0, trans-Resveratrol 539-86-6, Allicin 1399-64-0, Gymnemic acid 7440-66-6, Zinc, biological studies 7782-49-2, Selenium, biological studies **27750-10-3**, (-)-Hydroxycitric acid
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(niacin-bound chromium for preventing or reducing symptoms of insulin resistance syndrome, and use with other agents)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L42 ANSWER 16 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 4
AN 2003:694006 HCAPLUS
DN 140:93082
ED Entered STN: 05 Sep 2003
TI Effects of niacin-bound chromium, Maitake mushroom fraction SX and (-)-hydroxycitric acid on the metabolic syndrome in aged diabetic Zucker fatty rats
AU Talpur, Nadeem; Echard, Bobby W.; Yasmin, Taharat; **Bagchi, Debasis** ; Preuss, Harry G.
CS Department of Physiology and Biophysics, Georgetown University Medical Center, Washington, DC, USA
SO Molecular and Cellular Biochemistry (2003), 252(1&2), 369-377
CODEN: MCBIB8; ISSN: 0300-8177
PB Kluwer Academic Publishers
DT Journal
LA English
CC 18-1 (Animal Nutrition)
Section cross-reference(s): 14
AB Previous studies have demonstrated that niacin-bound chromium (NBC), Maitake mushroom, and (-)-hydroxycitric acid (HCA-SX) can ameliorate hypertension, dyslipidemia, and diabetes mellitus. They may be useful in body weight (BW) management. We used aged diabetic Zucker fatty rats (ZFR, 70-75 wk old) to determine whether NBC, fraction SX of Maitake mushroom (MSX), and 60% (-)-hydroxycitric acid (HCA-SX) from Garcinia cambogia, alone or in combination, can affect the metabolic syndrome X. The metabolic syndrome X is a concurrence of disturbed glucose and insulin metabolism, overweight, abdominal fat distribution, mild dyslipidemia, and hypertension, all of which are associated with subsequent development of type 2 diabetes mellitus and cardiovascular disease. Four groups of 8 ZFR were gavaged daily with the 3 different supplements. For the initial 3 wk, the control ZFR received only water, the second group received NBC with 40 μg elemental Cr/day, the third group MSX at 100 mg/day, and the fourth group HCA-SX at 200 mg/day. During weeks 4-6, the doses in each treatment were doubled. The control rats lost each .apprx.50 g BW over 6 wk of treatment, which is characteristic of these animals in declining health. The 8 ZFR receiving NBC lost each .apprx.9 g BW, while rats fed MSX lost each 16 g BW. ZFR fed HCA-SX simulated the pattern in the control group, as they lost each .apprx.46 g BW. The wide individual variations resulted in a lack of statistical significance among the groups. Nevertheless, 75% ZFR in the control group lost >50 g BW over 6 wk, whereas none of the ZFR fed NBC, 25% ZFR fed MSX, and 57% ZFR fed HCA-SX lost >50 g BW over 6 wk. ZFR in all 3 treatment groups had lower blood pressures compared to controls and this effect seemed to be dose related. The general trend was for renal and liver blood parameters, hepatic and renal lipid peroxidn.,

and DNA fragmentation to improve due to the supplementation with these natural products. Combination treatment with the 3 supplements led to lower systolic blood pressure and maintenance of BW compared to controls. Elderly diabetics and even aging individuals might benefit from similar dietary regimen.

ST nutrition chromium Maitake mushroom hydroxycitrate blood pressure body wt

IT Blood
Blood pressure
Body weight
Grifola frondosa
Kidney
Lipid peroxidation
Liver
Nutrition, animal
(dietary niacin-bound chromium, Maitake mushroom fraction SX and (-)-hydroxycitric acid effects on metabolic syndrome in aged diabetic Zucker fatty rats)

IT DNA
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(dietary niacin-bound chromium, Maitake mushroom fraction SX and (-)-hydroxycitric acid effects on metabolic syndrome in aged diabetic Zucker fatty rats)

IT Metabolic disorders
(metabolic syndrome X; dietary niacin-bound chromium, Maitake mushroom fraction SX and (-)-hydroxycitric acid effects on metabolic syndrome in aged diabetic Zucker fatty rats)

IT 50-99-7, D-Glucose, biological studies 57-13-6, Urea, biological studies 60-27-5, Creatinine 9000-86-6, Alt 9000-97-9, Ast
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(dietary niacin-bound chromium, Maitake mushroom fraction SX and (-)-hydroxycitric acid effects on metabolic syndrome in aged diabetic Zucker fatty rats)

IT 7440-47-3, Chromium, biological studies **27750-10-3**, (-)-Hydroxycitric acid 64452-96-6, 3-Pyridinecarboxylic acid, chromium(3+) salt
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(dietary niacin-bound chromium, Maitake mushroom fraction SX and (-)-hydroxycitric acid effects on metabolic syndrome in aged diabetic Zucker fatty rats)

RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L42 ANSWER 17 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 5
AN 2003:871815 HCAPLUS
DN 140:264420
ED Entered STN: 07 Nov 2003
TI Dose- and time-dependent effects of a novel (-)-hydroxycitric acid extract on body weight, hepatic and testicular lipid peroxidation, DNA fragmentation and histopathological data over a period of 90 days
AU Shara, Michael; Ohia, Sunney E.; Yasmin, Taharat; Zardetto-Smith, Andrea; Kincaid, Anthony; Bagchi, Manashi; Chatterjee, Archana; **Bagchi, Debasis**; Stohs, Sidney J.
CS School of Pharmacy and Health Professions, Department of Pharmacy Sciences, Creighton University Medical Center, Omaha, NE, 68178, USA
SO Molecular and Cellular Biochemistry (2003), 254(1&2), 339-346
CODEN: MCBIB8; ISSN: 0300-8177
PB Kluwer Academic Publishers
DT Journal
LA English
CC 1-12 (Pharmacology)
Section cross-reference(s): 11
AB (-)-Hydroxycitric acid (HCA), a natural extract from the dried fruit rind of Garcinia cambogia (family Guttiferae), is a popular supplement for weight management. The dried fruit rind has been used for centuries as a condiment in Southeastern Asia to make food more filling and satisfying. A significant number of studies highlight the efficacy of Super CitriMax (HCA-SX, a novel 60% calcium-potassium salt of HCA derived from Garcinia cambogia) in weight management. These studies also demonstrate that HCA-SX promotes fat oxidation, inhibits ATP-citrate lyase (a building block for fat synthesis), and lowers the level of leptin in obese subjects. Acute oral, acute dermal, primary dermal irritation and primary eye irritation toxicity studies have demonstrated the safety of HCA-SX. However, no long-term safety of HCA-SX or any other (-)-hydroxycitric acid extract has been previously assessed. In this study, we have evaluated the dose- and time-dependent effects of HCA-SX in Sprague-Dawley rats on body weight,

hepatic and testicular lipid peroxidn., DNA fragmentation, liver and testis weight, expressed as such and as a % of body weight and brain weight, and histopathol. changes over a period of 90 days. The animals were treated with 0, 0.2, 2.0 and 5.0% HCA-SX as feed intake and the animals were sacrificed on 30, 60 or 90 days of treatment. The feed and water intake were assessed and correlated with the reduction in body weight HCA-SX supplementation demonstrated a reduction in body weight in both male and female rats over a period of 90 days as compared to the corresponding control animals. An advancing age-induced marginal increase in hepatic lipid peroxidn. was observed in both male and female rats as compared to the corresponding control animals. However, no such difference in hepatic DNA fragmentation and testicular lipid peroxidn. and DNA fragmentation was observed Furthermore, liver and testis weight, expressed as such and as a percentage of body weight and brain weight, at 30, 60 and 90 days of treatment, exhibited no significant difference between the four groups. Taken together, these results indicate that treatment of HCA-SX over a period of 90 days results in a reduction in body weight, but did not cause any changes in hepatic and testicular lipid peroxidn., DNA fragmentation, or histopathol. changes.

ST hydroxycitrate wt management liver testis lipid peroxidn DNA fragmentation

IT Behavior
(drinking; effects of hydroxycitric acid extract on body weight, hepatic and testicular lipid peroxidn., DNA fragmentation and histopathol.)

IT Apoptosis
Body weight
Feeding
Lipid peroxidation
Liver
Testis
(effects of hydroxycitric acid extract on body weight, hepatic and testicular lipid peroxidn., DNA fragmentation and histopathol.)

IT DNA fragmentation
Lipid peroxidation
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(effects of hydroxycitric acid extract on body weight, hepatic and testicular lipid peroxidn., DNA fragmentation and histopathol.)

IT Natural products, pharmaceutical
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(effects of hydroxycitric acid extract on body weight, hepatic and testicular lipid peroxidn., DNA fragmentation and histopathol.)

IT **27750-10-3**, (-)-Hydroxycitric acid **449158-84-3**, Super CitriMax
RL: NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(effects of hydroxycitric acid extract on body weight, hepatic and testicular lipid peroxidn., DNA fragmentation and histopathol.)

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L42 ANSWER 18 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:777638 HCAPLUS
DN 137:257682
ED Entered STN: 11 Oct 2002
TI Method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compositions thereof
IN Ohia, Sunny E.; Preuss, Harry G.; **Bagchi, Debasis**
PA Interhealth Nutraceuticals, Inc., USA
SO PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K
CC 1-11 (Pharmacology)
Section cross-reference(s): 63
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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	CA 2463427	AA	20030703	CA 2002-2463427	20021220

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	US 2002-325675	A3	20021220		
	WO 2002-US41171	W	20021220		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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	IPCI	A61K [ICM,7]
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	ECLA	A23L001/30B; A23L001/304C; A61K031/19+M; A61K031/194; A61K031/194+M; A61K031/555+M; A61K031/704+M; A61K035/78+M
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AU 2002364213	IPCI	A61K0033-24 [ICM,7]; A61P0003-06 [ICS,7]; A61K0031-194 [ICS,7]; A61K0031-185 [ICS,7,C*]; A61K0035-78 [ICS,7]; A61P0003-04 [ICS,7]; A61P0003-00 [ICS,7,C*]
	IPCR	A23L0001-30 [I,A]; A23L0001-30 [I,C*]; A23L0001-304 [I,A]; A23L0001-304 [I,C*]; A61K0031-185 [I,C*]; A61K0031-19 [I,A]; A61K0031-194 [I,A]; A61K0031-555 [I,A]; A61K0031-555 [I,C*]; A61K0031-7028 [I,C*]; A61K0031-704 [I,A]
US 2004014692	IPCI	A61K0031-704 [ICM,7]; A61K0031-7028 [ICM,7,C*]; A61K0031-555 [ICS,7]; A61K0031-19 [ICS,7]; A61K0031-185 [ICS,7,C*]
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	NCL	514/033.000; 514/184.000; 514/574.000
	ECLA	A23L001/30B; A23L001/304C; A61K031/19+M; A61K031/194; A61K031/194+M; A61K031/555+M; A61K031/704+M; A61K033/24+M; A61K035/78+M
EP 1461051	IPCI	A61K0033-24 [ICM,7]; A61K0035-78 [ICS,7]; A61P0003-04 [ICS,7]; A61P0003-06 [ICS,7]; A61P0003-00 [ICS,7,C*]; A61K0031-194 [ICS,7]; A61K0031-185 [ICS,7,C*]
	IPCR	A23L0001-30 [I,A]; A23L0001-30 [I,C*]; A23L0001-304 [I,A]; A23L0001-304 [I,C*]; A61K0031-185 [I,C*]; A61K0031-19 [I,A]; A61K0031-194 [I,A]; A61K0031-555 [I,A]; A61K0031-555 [I,C*]; A61K0031-7028 [I,C*]; A61K0031-704 [I,A]
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JP 2005513107	IPCI	A61K0031-194 [ICM,7]; A61K0031-185 [ICM,7,C*]; A61K0031-704 [ICS,7]; A61K0031-7028 [ICS,7,C*]; A61K0033-24 [ICS,7]; A61K0035-78 [ICS,7]; A61P0003-04 [ICS,7]; A61P0003-00 [ICS,7,C*]
	IPCR	A23L0001-30 [I,A]; A23L0001-30 [I,C*]; A23L0001-304 [I,A]; A23L0001-304 [I,C*]; A61K0031-185 [I,C*]; A61K0031-19 [I,A]; A61K0031-194 [I,A]; A61K0031-555 [I,A]; A61K0031-555 [I,C*]; A61K0031-7028 [I,C*]; A61K0031-704 [I,A]
	FTERM	4C086/AA01; 4C086/AA02; 4C086/EA10; 4C086/HA08; 4C086/MA03; 4C086/MA04; 4C086/MA16; 4C086/MA35; 4C086/MA37; 4C086/MA43; 4C086/MA47; 4C086/MA52; 4C086/NA05; 4C086/ZA70; 4C088/AB12; 4C088/BA11; 4C088/BA13; 4C088/MA09; 4C088/MA16; 4C088/MA35; 4C088/MA37; 4C088/MA43; 4C088/MA47; 4C088/MA52; 4C088/NA05; 4C088/ZA70; 4C206/AA01; 4C206/AA02; 4C206/DA36; 4C206/MA03; 4C206/MA04; 4C206/MA28; 4C206/MA30; 4C206/MA36; 4C206/MA55; 4C206/MA57; 4C206/MA63; 4C206/MA67; 4C206/MA72; 4C206/NA05; 4C206/ZA70
NZ 532550	IPCI	A61K0033-24 [ICM,7]; A61K0035-78 [ICS,7]; A61P0003-04 [ICS,7]; A61P0003-06 [ICS,7]; A61P0003-00 [ICS,7,C*];

		A61K0031-194 [ICS,7]; A61K0031-185 [ICS,7,C*]
	IPCR	A23L0001-30 [I,A]; A23L0001-30 [I,C*]; A23L0001-304 [I,A]; A23L0001-304 [I,C*]; A61K0031-185 [I,C*]; A61K0031-19 [I,A]; A61K0031-194 [I,A]; A61K0031-555 [I,A]; A61K0031-555 [I,C*]; A61K0031-7028 [I,C*]; A61K0031-704 [I,A]
ZA 2003007594	IPCI	A61K [ICM,7]
US 2004157929	IPCI	A61K0031-19 [ICM,7]; A61K0031-185 [ICM,7,C*]
	IPCR	A23L0001-30 [I,A]; A23L0001-30 [I,C*]; A61K0031-185 [I,C*]; A61K0031-19 [I,A]; A61K0031-4406 [I,A]; A61K0031-4406 [I,C*]; A61K0033-24 [I,A]; A61K0033-24 [I,C*]
	NCL	514/574.000
	ECLA	A23L001/30B; A61K031/19; A61K031/19+M; A61K031/4406+M; A61K033/24+M; A61K035/78+M
ZA 2004002687	IPCI	A61K [ICM]
US 2005008722	IPCI	A61K0031-555 [ICM,7]; A61K0031-19 [ICS,7]; A61K0031-185 [ICS,7,C*]; A61K0035-78 [ICS,7]
	IPCR	A23L0001-30 [I,A]; A23L0001-30 [I,C*]; A23L0001-304 [I,A]; A23L0001-304 [I,C*]; A61K0031-185 [I,C*]; A61K0031-19 [I,A]; A61K0031-194 [I,A]; A61K0031-555 [I,A]; A61K0031-555 [I,C*]; A61K0031-7028 [I,C*]; A61K0031-704 [I,A]; A61K0033-24 [I,A]; A61K0033-24 [I,C*]
	NCL	424/777.000; 514/184.000; 514/574.000
	ECLA	A23L001/30B; A23L001/304C; A61K031/19+M; A61K031/194; A61K031/194+M; A61K031/555+M; A61K031/704+M; A61K033/24+M; A61K035/78+M
US 2005008723	IPCI	A61K0031-555 [ICM,7]; A61K0031-19 [ICS,7]; A61K0031-185 [ICS,7,C*]; A61K0035-78 [ICS,7]
	IPCR	A23L0001-30 [I,A]; A23L0001-30 [I,C*]; A23L0001-304 [I,A]; A23L0001-304 [I,C*]; A61K0031-185 [I,C*]; A61K0031-19 [I,A]; A61K0031-194 [I,A]; A61K0031-555 [I,A]; A61K0031-555 [I,C*]; A61K0031-7028 [I,C*]; A61K0031-704 [I,A]; A61K0033-24 [I,A]; A61K0033-24 [I,C*]
	NCL	424/777.000; 514/184.000; 514/574.000
	ECLA	A23L001/30B; A23L001/304C; A61K031/19+M; A61K031/194; A61K031/194+M; A61K031/555+M; A61K031/704+M; A61K033/24+M; A61K035/78+M
US 2005008724	IPCI	A61K0031-555 [ICM,7]; A61K0031-19 [ICS,7]; A61K0031-185 [ICS,7,C*]; A61K0035-78 [ICS,7]
	IPCR	A23L0001-30 [I,A]; A23L0001-30 [I,C*]; A23L0001-304 [I,A]; A23L0001-304 [I,C*]; A61K0031-185 [I,C*]; A61K0031-19 [I,A]; A61K0031-194 [I,A]; A61K0031-555 [I,A]; A61K0031-555 [I,C*]; A61K0031-7028 [I,C*]; A61K0031-704 [I,A]; A61K0033-24 [I,A]; A61K0033-24 [I,C*]
	NCL	424/777.000; 514/184.000; 514/574.000
	ECLA	A23L001/30B; A23L001/304C; A61K031/19+M; A61K031/194; A61K031/194+M; A61K031/555+M; A61K031/704+M; A61K033/24+M; A61K035/78+M
US 2005008725	IPCI	A61K0031-555 [ICM,7]; A61K0031-19 [ICS,7]; A61K0031-185 [ICS,7,C*]; A61K0035-78 [ICS,7]
	IPCR	A23L0001-30 [I,A]; A23L0001-30 [I,C*]; A23L0001-304 [I,A]; A23L0001-304 [I,C*]; A61K0031-185 [I,C*]; A61K0031-19 [I,A]; A61K0031-194 [I,A]; A61K0031-555 [I,A]; A61K0031-555 [I,C*]; A61K0031-7028 [I,C*]; A61K0031-704 [I,A]; A61K0033-24 [I,A]; A61K0033-24 [I,C*]

	NCL	424/777.000; 514/184.000; 514/574.000
	ECLA	A23L001/30B; A23L001/304C; A61K031/19+M; A61K031/194; A61K031/194+M; A61K031/555+M; A61K031/704+M; A61K033/24+M; A61K035/78+M
US 2005008726	IPCI	A61K0031-555 [ICM,7]; A61K0031-19 [ICS,7]; A61K0031-185 [ICS,7,C*]; A61K0035-78 [ICS,7]
	IPCR	A23L0001-30 [I,A]; A23L0001-30 [I,C*]; A23L0001-304 [I,A]; A23L0001-304 [I,C*]; A61K0031-185 [I,C*]; A61K0031-19 [I,A]; A61K0031-194 [I,A]; A61K0031-555 [I,A]; A61K0031-555 [I,C*]; A61K0031-7028 [I,C*]; A61K0031-704 [I,A]; A61K0033-24 [I,A]; A61K0033-24 [I,C*]
	NCL	424/777.000; 514/184.000; 514/574.000
	ECLA	A23L001/30B; A23L001/304C; A61K031/19+M; A61K031/194; A61K031/194+M; A61K031/555+M; A61K031/704+M; A61K033/24+M; A61K035/78+M
US 2005013887	IPCI	A61K0031-555 [ICM,7]; A61K0035-78 [ICS,7]; A61K0031-19 [ICS,7]; A61K0031-185 [ICS,7,C*]
	IPCR	A23L0001-30 [I,A]; A23L0001-30 [I,C*]; A23L0001-304 [I,A]; A23L0001-304 [I,C*]; A61K0031-185 [I,C*]; A61K0031-19 [I,A]; A61K0031-194 [I,A]; A61K0031-555 [I,A]; A61K0031-555 [I,C*]; A61K0031-7028 [I,C*]; A61K0031-704 [I,A]; A61K0033-24 [I,A]; A61K0033-24 [I,C*]
	NCL	424/777.000; 514/184.000; 514/559.000; 514/574.000
	ECLA	A23L001/30B; A23L001/304C; A61K031/19+M; A61K031/194; A61K031/194+M; A61K031/555+M; A61K031/704+M; A61K033/24+M; A61K035/78+M

AB A method for increasing serotonin levels in a person includes identifying a person having a deficient serotonin level and administering to the person a composition incorporating hydroxycitric acid, preferably in the form of an extract of Garcinia cambogia, in an amount sufficient to increase the person's serotonin levels. The method also can incorporate administering chromium, preferably in the form of oxygen-coordinated, niacin-bound chromium, and gymnemic acid, preferably in the form of an extract of Gymnema sylvestre, to synergistically work to further increase serotonin levels in the person.

ST hydroxycitrate chromium gymnemin Garcinia Gymnema serotonin appetite disorder depression

IT Sleep
(-waking cycle; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)

IT Drug delivery systems
(capsules; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)

IT Brain
(cerebral cortex; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)

IT Mental and behavioral disorders
(depression; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)

IT Drug delivery systems
(gum; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)

IT Eating disorders

(hyperphagia; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)

IT Drug delivery systems
(liqs.; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)

IT Body weight
(loss; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)

IT Drug delivery systems
(lozenges; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)

IT Antidepressants
Anxiety
Anxiolytics
Appetite
Bulimia
Energy metabolism, animal
Food
Garcinia cambogia
Gymnema sylvestre
Human
Insomnia
(method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)

IT Gymnemic acids
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)

IT Mental and behavioral disorders
(mood-affecting; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)

IT Mental and behavioral disorders
(obsession-compulsion; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)

IT Drug delivery systems
(powders; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)

IT Ovarian cycle
(premenstrual syndrome; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)

IT Drug interactions
(synergistic; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)

IT Drug delivery systems
(tablets; method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)

IT 50-67-9, Serotonin, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)

IT 7440-47-3D, Chromium, niacin-bound **27750-10-3**, (-)-Hydroxycitric acid
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(method for increasing serotonin levels in a person by administration of a composition incorporating (-)-hydroxycitric acid, and related compns. thereof)

L42 ANSWER 19 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 6
AN 2002:663790 HCAPLUS
DN 138:265500
ED Entered STN: 03 Sep 2002
TI Safety and mechanism of appetite suppression by a novel hydroxycitric acid extract (HCA-SX)
AU Ohia, Sunny E.; Opere, Catherine A.; LeDay, Angela M.; Bagchi, Manashi; **Bagchi, Debasis**; Stohs, Sidney J.
CS Department of Pharmacy Sciences, Creighton University School of Pharmacy and Allied Health Professions, Omaha, NE, 68178, USA
SO Molecular and Cellular Biochemistry (2002), 238(1&2), 89-103
CODEN: MCBIB8; ISSN: 0300-8177
PB Kluwer Academic Publishers
DT Journal
LA English
CC 1-11 (Pharmacology)
Section cross-reference(s): 11
AB A growing body of evidence demonstrates the efficacy of Garcinia cambogia-derived natural (-)-hydroxycitric acid (HCA) in weight management by curbing appetite and inhibiting body fat biosynthesis. However, the exact mechanism of action of this novel phytopharmaceutical has yet to be fully understood. In a previous study, we showed that in the rat brain cortex a novel HCA extract (HCA-SX, Super CitriMaxTM) increases the release/availability of radiolabeled 5-hydroxytryptamine or serotonin ([3H]-5-HT), a neurotransmitter implicated in the regulation of eating behavior and appetite control. The aim of the present study was 2-fold: (a) to determine the effect of HCA-SX on 5-HT uptake in rat brain cortex in vitro; and (b) to evaluate the safety of HCA-SX in vivo. Isolated rat brain cortex slices were incubated in oxygenated Krebs solution for 20 min and transferred to buffer solns. containing [3H]-5-HT for different time intervals. In some expts., tissues were exposed to HCA-SX (10 μM - 1 mM) and the serotonin receptor reuptake inhibitors (SRRI) fluoxetine (100 μM) plus clomipramine (10 μM). Uptake of [3H]-5-HT was expressed as d.p.m./mg wet weight A time-dependent uptake of [3H]-5-HT occurred in cortical slices reaching a maximum at 60 min. HCA-SX, and fluoxetine plus clomipramine inhibited the time-dependent uptake of [3H]-5-HT. At 90 min, HCA-SX (300 μM) caused a 20% decrease, whereas fluoxetine plus clomipramine inhibited [3H]-5-HT uptake by 30%. In safety studies, acute oral toxicity, acute dermal toxicity, primary dermal irritation and primary eye irritation, were conducted in animals using various doses of HCA-SX. Results indicate that the LD50 of HCA-SX is greater than 5000 mg/kg when administered once orally via gastric intubation to fasted male and female Albino rats. No gross toxicol. findings were observed under the exptl. conditions. Taken together, these in vivo toxicol. studies demonstrate that HCA-SX is a safe, natural supplement under the conditions it was tested. Furthermore, HCA-SX can inhibit [3H]-5-HT uptake (and also increase 5-HT availability) in isolated rat brain cortical slices in a manner similar to that of SRRIs, and thus may prove beneficial in

controlling appetite, as well as treatment of depression, insomnia, migraine headaches and other serotonin-deficient conditions.
ST hydroxycitrate appetite suppressant Garcinia ext brain serotonin uptake obesity; Super CitriMax antiobesity oral toxicity skin eye irritation depression
IT Eye, disease
Skin, disease
(irritation; safety and mechanism of appetite suppression by novel hydroxycitric acid extract)
IT Adipose tissue
Appetite depressants
Dietary supplements
Feeding
Garcinia cambogia
Obesity
(safety and mechanism of appetite suppression by novel hydroxycitric acid extract)
IT 50-67-9, Serotonin, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(SSRI (selective serotonin reuptake inhibitors); safety and mechanism of appetite suppression by novel hydroxycitric acid extract)
IT **27750-10-3**, Hydroxycitric acid
RL: ADV (Adverse effect, including toxicity); DMA (Drug mechanism of action); NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(safety and mechanism of appetite suppression by novel hydroxycitric acid extract)
IT 303-49-1, Clomipramine 54910-89-3, Fluoxetine
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(safety and mechanism of appetite suppression by novel hydroxycitric acid extract)
RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L42 ANSWER 20 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 7
AN 2001:849120 HCAPLUS
DN 136:117853
ED Entered STN: 23 Nov 2001
TI Effect of hydroxycitric acid on serotonin release from isolated rat brain cortex
AU Ohia, Sunny E.; Awe, S. Olubusayo; LeDay, Angela M.; Opere, Catherine A.;

Bagchi, Debasis
CS Department of Pharmacy Sciences, School of Pharmacy and Allied Health Professions, Creighton University, Omaha, NE, 68178, USA
SO Research Communications in Molecular Pathology and Pharmacology (2001), 109(3 & 4), 210-216
CODEN: RCMPE6; ISSN: 1078-0297
PB PJD Publications Ltd.
DT Journal
LA English
CC 18-7 (Animal Nutrition)
Section cross-reference(s): 13
AB The authors investigated the effect of hydroxycitric acid (HCA) on basal and potassium-depolarization evoked increase in radiolabeled serotonin ([3H]-5-HT) release from rat brain cortex slices in vitro. HCA (10 μM-1 mM) altered the baseline of spontaneous tritium efflux but had no significant effect on potassium-evoked release of [3H]-5-HT. When applied on its own, HCA (10 μM-1 mM) elicited a concentration-dependent increase in efflux of [3H]-5-HT reaching a maximum at 300 μM. It can be concluded that HCA can increase the release of radiolabeled 5-HT from the isolated rat brain cortex.
ST hydroxycitrate serotonin brain cortex
IT Brain
(cortex; hydroxycitric acid effect on serotonin release from isolated rat brain cortex)
IT Appetite
Garcinia cambogia
(hydroxycitric acid effect on serotonin release from isolated rat brain cortex)
IT 50-67-9, Serotonin, biological studies **27750-10-3**, (-)-Hydroxycitric acid
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(hydroxycitric acid effect on serotonin release from isolated rat brain cortex)
RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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L42 ANSWER 21 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:849118 HCAPLUS
DN 136:160871
ED Entered STN: 23 Nov 2001
TI Acute and long-term safety evaluation of a novel IH636 grape seed proanthocyanidin extract
AU Ray, Sidhartha; **Bagchi, Debasis**; Lim, Pansy M.; Bagchi, Manashi; Gross, Stephen M.; **Kothari, Shil C.**; Preuss, Harry G.; Stohs, Sidney J.
CS Department of Pharmacology, Toxicology and Medicinal Chemistry, Arnold & Marie Schwartz College of Pharmacy and Health Sciences, Long Island University, Brooklyn, NY, 11201, USA

SO Research Communications in Molecular Pathology and Pharmacology (2001), 109(3 & 4), 165-197
CODEN: RCMPE6; ISSN: 1078-0297
PB PJD Publications Ltd.
DT Journal
LA English
CC 1-4 (Pharmacology)

AB This study describes acute and chronic safety studies on an IH636 grape seed proanthocyanidin-containing extract (GSPE). Acute oral toxicity, dermal toxicity, dermal irritation and eye irritation studies were conducted. The LD50 of GSPE was >5000 mg/kg when administered once orally via gastric intubation to fasted male and female albino rats. The LD50 of GSPE was >2000 mg/kg when applied once for 24 h to the clipped, intact skin of male and female albino rats. In addition, 2000 mg/kg was the no-observed-effect level for systemic toxicity. In a dermal irritation study, GSPE received a descriptive rating classification of moderately irritating. Extensive chronic studies were also conducted. The effects of chronic administration of 100 mg GSPE/kg/day for 12 mo and its effects on seven vital target organs: brain, heart, intestines, kidneys, liver, lungs and spleen, and on serum chemical, were assessed in male B6C3F1 mice. Furthermore, the dose-dependent chronic effects of GSPE in female B6C3F1 mice were evaluated. Mice were fed 0, 100, 250 or 500 mg GSPE/kg/day for 6 mo and the effects on brain, duodenum, heart, kidneys, liver, lungs, pancreas and spleen, and on serum chemical, were examined These acute studies demonstrated that GSPE is safe and did not cause any detrimental effects in vivo under the conditions of this study.

ST grape seed ext proanthocyanidin toxicity
IT Vitis vinifera
(acute and long-term safety evaluation of a proanthocyanidin-containing extract of grape seeds)
IT Proanthocyanidins
RL: ADV (Adverse effect, including toxicity); NPO (Natural product occurrence); BIOL (Biological study); OCCU (Occurrence)
(acute and long-term safety evaluation of a proanthocyanidin-containing extract of grape seeds)

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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